Prenatal Care

FEDERAL SECURITY AGENCY
SOCIAL SECURITY ADMINISTRATION
CHILDREN'S BUREAU

See That the Birth of Your Baby Is Registered

The birth of your baby should be registered promptly and properly. This is of utmost importance and should be done within 36 hours after the baby's birth.

The physician, midwife, nurse, or other attendant is required in every State to report the birth to the local registrar, who will see that the date of birth and the child's name, together with other related facts, are made matters of permanent record.

Birth registration is necessary in order to prove the date of your child's birth and his citizenship. His right to enter school, to go to work, to inherit property, to marry, and to hold office may depend upon proof of age or citizenship or both, and this proof is most readily established by means of a birth certificate.

Proof of age is also necessary in order to obtain certain benefits under the Social Security Act, such as aid to dependent children and old-age and survivors insurance.

If there is any doubt about whether the birth of a child has been registered, an inquiry may be sent to the State board of health where the records are filed. By making sure that the birth of every child born to them is registered, parents are protecting the fundamental rights of their children.

It is suggested that the parents keep a memorandum of certain facts recorded in the birth certificate:

Baby's name.....

Father's name.....

Mother's maiden name.....

Sex of baby.....

If twin or triplet, give number in order of birth.....

Date of baby's birth..... ....

(Hour) (Day) (Month) (Year)

Birthplace:

City, town, or village.....

County.....

State.....

Attending physician:

Name.....

Address.....

Registrar's number.....

Contents

	Page
See that the birth of your baby is registered	Inside front cover
Letter of transmittal	IV
Signs of pregnancy	1
Duration of pregnancy	2
Engaging the doctor and the nurse	3
Importance of physical examination	3
Medical and nursing supervision throughout pregnancy	3
The hygiene of pregnancy	6
Diet	6
Exercise and rest	11
Clothing	12
Care of the bowels	13
Care of the kidneys	14
Baths and care of the skin	14
Care of the teeth	14
Care of the breasts	15
Intercourse during pregnancy	15
Mental hygiene	16
Home or hospital for the delivery	18
Supplies and equipment	19
The delivery room and its equipment	19
Supplies for the mother	20
Supplies for the newborn baby	21
Common disorders of pregnancy	24
Nausea and vomiting	24
Heartburn	24
Varicose veins and piles	24
Cramps in the legs	24
Relaxation of the pelvic joints	25
Leucorrhea	25
Complications of pregnancy	26
Toxemia	26
Miscarriage	27
Bleeding in pregnancy	28
Birth of the baby	29
Precautions that must be taken	29
Birth of the baby—Continued.	
Labor	29
Emergencies	31
First care of the newborn	33
Nitrate of silver for the baby's eyes	33
Bathing the baby	33
The baby's stools	34
Lying-in period	35
Nursing the baby	36
Breast feeding better than artificial feeding	36
Colostrum	36
Position for nursing	37
Feeding schedule	37
Care of the breasts	37
The baby's progress	38
Hygiene of the nursing mother	39
Diet	39
Sleep and rest	40
Fresh air and exercise	40
Work	40
Contentment	41
Recreation	41
Regulation of the bowels	41
Bathing	41
Alcohol and tobacco	42
The premature baby	45
Care immediately after birth	46
General care	47
Feeding	50
Gain in weight	55
Outdoor life	55
Periodic health examinations	56
Later development	56
Glossary	57

Foreword

This edition of the bulletin Prenatal Care, although not completely rewritten, has been amended in accordance with recent medical thought. Originally published in 1913, Prenatal Care was the first of the Children's Bureau series on the care of children.

Under the general supervision of Dr. Katherine Bain, Director of the Division of Research in Child Development, the work on this bulletin was done by members of the Children's Bureau medical, nursing, and nutrition staff. The manuscript was reviewed by the Bureau's advisory committee of obstetricians consisting of Dr. Robert L. DeNormandie and Dr. Fred L. Adair.

July 1942.

Prenatal Care

Prenatal care is that part of the care of the mother which has as its object the complete supervision of the pregnant woman in order to preserve the happiness, health, and life of the mother and child. What this prenatal care should be is the subject matter of this book.

More important than anything else in planning the best possible care for mother and child is that the mother should go to a doctor for examination and advice just as soon as she thinks she is pregnant and should remain under his constant care until the baby is born. This book is not meant to take the place of this medical care. It is written in the hope that it will be helpful to expectant mothers as a supplement to the doctor's instructions.

Signs of Pregnancy

Early signs that a pregnancy is probably present are these:

1. Missing a monthly period.
2. Changes in the breasts.
3. Nausea or vomiting—"morning sickness."
4. Desire to pass urine more often than usual.

The first is the most significant. The missing of the monthly, or menstrual, period is especially suggestive of pregnancy in the case of a woman who has always had regular, normal monthly periods, and has had a recent opportunity of becoming pregnant. The missing of two monthly periods, one after the other, makes pregnancy more probable.

At the time of the first skipped normal period the breasts often get a little larger. They may also be tender to the touch and may have a stinging or prickling feeling. If the breasts have never felt like this before during the monthly period, the feeling is probably another sign that pregnancy exists.

A feeling of nausea, or sickness of the stomach, sometimes with vomiting, is a very common early sign of pregnancy. Most women who are troubled with this nausea feel it in the morning, and it is commonly called "morning sickness." Some women feel it in the late afternoon or early evening. And some women do not feel it at all.

The desire to pass urine more often than usual is very common early in pregnancy. Women when pregnant sometimes have to get up during the night to pass urine who before had been able to sleep right through the night.

When all four of these signs appear, the woman is probably pregnant. A doctor can give a more definite opinion, however, after he has made an examination by the vagina, which is the lower part of the birth canal. This examination should always be made early in pregnancy, as it enables the doctor to make sure that the pelvic organs—those parts of the body directly connected with childbearing—are in good condition and position.

At about 4½ months the mother can usually "feel life"—that is, feel the baby move in the uterus, or womb, the organ in which it develops. This movement, which is also called "the quickening," is a fairly certain sign of pregnancy. The movement of gas in the intestines, however, may cause a feeling so similar that a woman may mistake it for the quickening. The positive signs that a woman is pregnant are feeling the baby move and hearing the baby's heart beat. These can be determined by a doctor's examination about the fifth month or sometimes earlier.

Duration of Pregnancy

The probable length of pregnancy is about 40 weeks, or 280 days from the beginning of the last monthly period. If you count 30 days to the month, the 280 days come to just a little more than the 9 months commonly spoken of as the period of pregnancy. You may determine the probable date of delivery by counting back from the beginning of the last monthly period 3 calendar months and adding 7 days. For example, if the last monthly period began on October 30, counting back 3 months to July 30 and adding 7 days gives August 6 as the estimated date of confinement. Many babies are born a few days earlier or a few days later than the expected date, some as much as 2 or 3 weeks later. In these cases the usual explanation is that the pregnancy began in relation to the period that was missed and not from the last period that appeared. Therefore, if the delivery does not come when it is expected, there is no reason, in by far the majority of cases, to think that anything is abnormal; it usually means that the mother did not become pregnant as early as it was thought.

Engaging the Doctor and the Nurse

As soon as a woman thinks she may be pregnant she should choose her doctor and go to him at once for a complete physical examination and for advice as to the hygiene of pregnancy. At this first visit the doctor will ask her many questions about her medical history—what diseases and operations she has had, if any, with special detail for any involving the abdomen or the pelvis; whether her monthly periods have always been regular and normal; whether she has been pregnant before, and, if so, when her pregnancy and labor occurred and what they were like. He will also ask her the date and character of her last normal monthly period, for from this he will estimate the date of delivery.

IMPORTANCE OF PHYSICAL EXAMINATION

A complete physical examination will include—besides an external abdominal and an internal vaginal examination and measurements of the pelvis, or bony framework of the birth canal—an examination of the teeth, tonsils, throat, thyroid, heart, lungs, kidneys, and digestive organs, taking of blood pressure and weight, and testing of the blood. This examination is most important for the mother's well-being, for it enables the doctor to find out whether her organs are in good condition and to start treatment at once if anything is wrong. Moreover, if the doctor knows the mother's condition early in pregnancy, he will be able to discover slight changes at later examinations if they appear and interpret them intelligently. Pregnancy and labor are normal functions of the body and do not normally interfere with health; in fact, many women are in better health after pregnancy than before. However, pregnancy must be carefully and constantly watched, for it may become abnormal very quickly and will then require special treatment to insure a happy outcome for mother and child.

MEDICAL AND NURSING SUPERVISION THROUGHOUT PREGNANCY

It is at this first visit that the doctor will go over with the expectant mother the hygiene of pregnancy, or prenatal care. He will explain to her why she should go at once to a good dentist. The doctor will tell her when he himself wishes to see her—at least once a month during the first 6 months, every 2 weeks or oftener in the next 2 months, and every week in the last month. He will explain to her what he will do at each visit—look into her general condition, take her blood pressure, analyze her urine, and carefully weigh her.

BLOOD PRESSURE SHOULD BE TAKEN AT EACH PRENATAL VISIT TO THE DOCTOR

The plan that will be followed should be carefully talked over by the doctor and the expectant mother, and she should feel free to ask about its cost. If she cannot afford to go to a private physician, she should go at once to a prenatal center or clinic and should report to the clinic as required. She should follow absolutely the directions given to her by the physician at his office or at the clinic.

During pregnancy the mother will need a nurse's guidance in following the doctor's instructions and in making plans for confinement; she may need nursing care also. She may get this service from the nurse who helps the doctor in his office or clinic, or from a public-health nurse on the staff of the local health department or of some private organization such as the visiting-nurse association.

If a woman finds it impossible to see a doctor as often as has been advised, it is highly important that she should be in close touch with a public-health nurse, who will observe her and report any suspicious symptoms to the doctor in charge.

If the mother is to be delivered at home she will wish to arrange for nursing care during confinement. She should discuss with the doctor the plans for this care, and the final arrangements should be made well in advance of the expected date of delivery. Usually the doctor will assist the mother in obtaining nursing care, whether from a private-duty nurse or from a public-health nurse. If a private nurse is to be employed she should be engaged some time before the expected date of delivery; and as this date is uncertain it is well to have a definite understanding when her pay is to begin. If a public-health or visiting nurse is to assist the physician at delivery, she, too, should be engaged well in advance. The nurse should visit the home a few weeks before the baby is expected and make herself familiar with the rooms and the arrangements for the birth. She will be needed for a longer or shorter period in different cases; but as it is important that the mother should rest and be relieved of strain for the first weeks after childbirth, it is worth stretching a point financially to keep the nurse as long as she is needed—2 weeks at least and 3 or 4 weeks in some cases. In many places, particularly in large cities, a public-health nurse will come as needed. If the confinement is a normal one and there is someone to do the housework, the needs of mother and baby may be provided for in this way very well and much more cheaply than when a trained nurse is employed for the entire time. Other forms of nursing service may be had in different communities; some are good and some are not so good. But the best nursing that she can have is what the expectant mother should plan for.

764123°—47——2

The Hygiene of Pregnancy

Simple rules for keeping well during pregnancy are given by the doctor at the first visit of the expectant mother. The details that he would tell her about if he had all the time that he would like are set down here for her to read and refer to. She must remember that she is like an athlete in training for a race or a swimming contest, who lives according to rules that have been worked out to give him the best possible preparation for the test that he will have to meet. Her test is her confinement, and the goal is health for the baby and herself.

DIET

During pregnancy nature is building a new person. The mother supplies the building materials in the form of nourishment which passes through the placenta (afterbirth) to the growing baby. Therefore her diet must have in it the foods which contain the proper kinds of building materials. A woman may live in fair health on a diet upon which she cannot nourish an unborn baby and keep her health. If the baby cannot get what he needs from the mother's food, he will take it from her body. This means that the mother will be malnourished. If she was in good health when she became pregnant and if she eats enough of the right kinds of food this need not happen.

The building materials for the body are furnished by a wide variety of foods. The mother needs to select foods carefully to get the right kind in sufficient amounts to furnish all the important essentials that must be supplied if her health and her baby's health are to be assured. She should choose foods that will supply the proteins essential for building firm muscle. She should choose foods rich in calcium and phosphorus, for these are essential for sound bone and good tooth development. She should choose foods high in iron, not only to meet the needs of the baby before he is born but also to enable him to build up a reserve supply upon which he may draw during the first few months after he is born. Foods rich in vitamins are also important for the well-being of both the mother and the baby.

In fact, all the essentials of a good diet should be included, for such a diet not only insures health protection for the mother and the baby before birth, but also increases the chances of the mother's being able to nurse the baby after he is born.

If the expectant mother is in good general health and has had an adequate diet before pregnancy, very few changes need be made during the early months. It is important, however, that she review carefully what she has been eating to be sure that it really is adequate. The few changes necessary usually include an increase in certain kinds of food, such as milk, fruit, vegetables, and whole-grain products.

MILK

Milk is superior to any other single food because it contains many of the dietary essentials necessary for good growth and development. It contains building material for good muscular development, calcium and phosphorus for good bone and tooth development, and some of the more important vitamins.

Whether milk is used as a beverage or in cooked food does not matter. It is usually wise, however, to drink part of it, for it is difficult to include the needed amount in the cooked food. Fresh milk should be pasteurized or boiled. There are many ways of using milk—in soups, in puddings, in sauces, and in custards. Cereal also may be cooked in milk.

The form in which milk is purchased is usually determined by personal likes and dislikes, convenience, availability, and cost. Evaporated milk, when diluted with an equal amount of water, and dried whole milk, when properly mixed, may be used in place of fresh whole milk. If buttermilk or skim milk (fresh or dried) is used, it is usually wise to use, in addition, some butter or fortified margarine to help furnish vitamin A. If, however, the doctor wishes the mother to keep down the fat in her diet because she is overweight or tends to gain too rapidly, extra servings of green leafy or yellow vegetables will help to meet the vitamin-A requirement. Most types of cheese may be substituted for a part of the milk supply.

WHOLE GRAINS AND ENRICHED GRAIN PRODUCTS

Whole grains are good sources of some minerals and vitamins. For this reason and also because they help to regulate the bowels, it is well for the pregnant woman to have most of her bread and cereals made from whole or lightly milled grains. The germ and bran, discarded in the preparation of white flour and refined cereals, contain minerals and vitamins that the body needs and that are particularly important in the pregnant woman's diet. Some of the most important of this vitamin and mineral value that is lost in the milling of white flour has been added to the enriched white flour and enriched white bread now on the market. Some cereal breakfast foods made from refined grains have had part of the minerals and vitamins "restored;" these restored cereals have more food value than ordinary refined breakfast foods.

VEGETABLES AND FRUITS

Vegetables and fruits of all kinds should be eaten during pregnancy because of their high vitamin and mineral content.

Green leafy and deep-yellow vegetables are especially valuable because of the vitamin A and iron that they contain. Tomatoes, canned or fresh, are important, too, since they are rich in vitamin C and vitamin A. Raw salad greens also are rich in vitamin C. Potatoes, sweetpotatoes, root vegetables, and cabbage make real contributions to the diet and should be eaten regularly because they are plentiful and cheap most of the year.

All kinds of fruits are valuable, and the choice depends to a considerable extent upon cost and availability. Certain fruits, such as oranges, grapefruit, berries, and melons, are excellent sources of vitamin C; therefore they should be included in the diet of every pregnant woman. Canned orange and grapefruit juice may be substituted for the fresh juice without sacrificing any appreciable amount of vitamin C.

THE EXPECTANT MOTHER MAY CHOOSE FROM A WIDE VARIETY OF FOOD

Fresh, canned, quick-frozen, or dried vegetables and fruits may be used. The choice will depend upon personal preference, availability, and cost.

COD-LIVER OIL AND OTHER SOURCES OF VITAMIN D

The mother should have a good source of vitamin D not only during pregnancy but during the nursing period. This may be cod-liver oil or some other source recommended by the doctor. It is of special value in places without much sunshine. It is recommended that the amount given daily be sufficient to supply 800 international units of vitamin D. The label on every bottle or package of a preparation that supplies vitamin D should show how many such units are contained in a given amount of the preparation.

IODINE

A small amount of iodine is necessary for normal growth and health. If this is not provided, the thyroid may enlarge and form a goiter. In certain regions in the United States, especially around the Great Lakes, the water and soil have lost their iodine, so that foods grown in these localities may not provide the necessary amount. At least in these regions, throughout pregnancy, iodine should be given to prevent goiter in the baby as well as in the mother. Iodized table salt may fill this need. Its use or the taking of iodine in any other form should be directed by a doctor.

DAILY FOOD NEEDS

The food needs of the pregnant woman and the baby will be met if the following foods are used *every day:*

Milk: One quart.

Vegetables and fruits: Five or six servings (not necessarily different vegetables):
- Potato.
- A green leafy or deep-yellow vegetable.
- A raw vegetable or fruit.
- A fruit or vegetable rich in vitamin C.
- Another fruit or vegetable.

Whole-grain, enriched, or restored cereals and bread: Two servings.

Eggs: One egg.

Meat, poultry, or fish: One serving. Liver should be eaten at least once a week. Cheese or dried beans may be eaten occasionally in place of meat.

A good source of vitamin D: Cod-liver oil or some other source directed by the doctor.

Additional foods: As needed to meet the demands of the individual woman.

Water: In liberal amounts.

One way of including each of these types of food is shown in the following plan for the day's meals:

A DAY'S MEAL PLAN FOR THE HEALTHY PREGNANT WOMAN OF AVERAGE WEIGHT

BREAKFAST

Fruit: Grapefruit, orange, or other fruit rich in vitamin C.

Cereal: Whole-grain or restored.

Bread: Whole-grain or enriched bread with butter or with margarine that contains added vitamin A.

Milk: A glass of milk, or a cup of cocoa made with milk. Coffee may be taken, if desired, but it should not replace the milk.

DINNER

Meat: A liberal serving of lean meat.

Vegetables:

A potato, white or sweet.

A cooked vegetable, usually a green leafy vegetable or a deep-yellow one.

A raw vegetable; this may be served as a salad.

Bread: Whole-grain or enriched bread with butter or with margarine that contains added vitamin A.

Dessert: Desserts made with milk or fruit should be served often.

Milk: A glass of milk.

SUPPER OR LUNCHEON

Main dish: A dish made with eggs, or with cheese, or with milk, such as an omelet or rice and cheese.

Vegetable: A cooked vegetable or a salad, depending upon the choice made at other meals.

Dessert: Raw or cooked fruit, with plain cake or cookies.

Milk: A glass of milk.

Cod-liver oil or some other source of vitamin D as directed by the doctor.

As has been mentioned, if the expectant mother is in good health and is on a good diet she need make no radical changes. Just as would be the case if she were not pregnant, the quantity of food must be determined on an individual basis. In addition to the state of her general health, such factors as her weight at the beginning of pregnancy and her daily activities must be considered.

The amount of salt commonly used in cooking is sufficient for the expectant mother. She should not add salt at the table. Under some circumstances the amount used in cooking may have to be reduced or even eliminated. Salty meats and salt fish should be avoided.

DIET AND DIGESTION

No matter how generally suitable the diet, the mother and the baby are not getting its full benefit unless the food is properly digested. A healthful, happy life, with plenty of outdoor sunshine, enables the mother to use her food to the best advantage. She may find four or five small meals better than three large ones, especially in early pregnancy if she is troubled with nausea. Eating too much, eating in a hurry, or eating at irregular hours is not a wise procedure, as it may cause discomfort. She may find some foods easier to digest than others, and it would be wise to leave out any that constantly trouble her. Fried and highly seasoned foods are particularly apt to cause digestive disturbances. Early in pregnancy, if she is feeling nauseated, she may find that fats increase her discomfort; in this case, she should cut down their amount at least for the time being. She often can take butter and cream without resulting discomfort, whereas cooked fats are less easily digested.

Now and then an expectant mother has a craving for certain foods. There is no reason why she should not satisfy that craving if the food desired agrees with her and does not take the place of other more important foods.

DIET AND ELIMINATION

The mother's body not only must supply food for the baby's development but must carry off the baby's waste products as well as her own. Since liquids help the body to throw off these waste products, it is most important that the pregnant woman have a liberal amount of water and other fluids daily. Eating a variety of fruits, vegetables, and whole-grain products in generous amounts also promotes good elimination.

DIET AND WEIGHT

An unusual gain in weight *may* be due to overeating. If so, a reduction in the total amount of food is usually advisable. In cutting down the total amount of food, however, it is important that there be no reduction in the amounts of the essential foods. The foods that may be safely reduced are some fats, sweets, pastries, and refined cereals and breads.

Frequently there are causes for rapid gain in weight, other than overeating. Any sudden marked gain may be a danger signal and should be reported at once to the doctor; it may be due to an accumulation of fluid in the body.

Limiting the amount of food with the idea of having a small baby not only is futile but is even dangerous.

EXERCISE AND REST

Daily exercise is important for health. The expectant mother should spend at least 2 hours each day (more if possible) in the open air and sunshine, and she should be getting some exercise during at least part of this time out of doors unless necessary household or other tasks have already tired her.

Violent exercise and excessive hard work should be avoided during pregnancy. Avoid reaching and lifting or pushing heavy things around. Most husbands will be glad to take over the heavier tasks during this time if they understand that this kind of work may injure the mother and the baby.

Less exercise should be taken at the time the monthly period ordinarily would be due, as there is more danger of miscarriage at this time. Marking these dates on a calendar will help the mother to plan a quiet life during these times.

WALKING AND OTHER OUTDOOR EXERCISE

A woman who has been used to an active outdoor life will probably be able to continue active exercise, but she should avoid very tiring and dangerous and competitive sports. If the mother has been used to a quiet indoor life, she should plan to take regular exercise and to take it out of doors, but she will find it wise to begin it very moderately. In pleasant weather walking is a valuable exercise. The length of the walk will depend on how soon the mother tires. It may be 2 miles or more if she is accustomed to walking; but if she finds that she is tired after half a mile, she should not try to go so far the next time. Easy gardening work is a good and a pleasant form of exercise; it should be not a task that must be finished but a diversion that may be stopped at will. If the day is too cold or too stormy for the mother to go out she should walk on the porch or at least in a room with the windows wide open.

There is nothing that takes the place of outdoor life. Sunshine, besides being good for the general health, has a special value for the pregnant woman because it enables the baby to make use of the calcium (or lime) in the food for building bones and teeth. Pleasant open-air occupations strengthen the muscles, stimulate the sweat glands and other organs that get rid of the body's wastes, benefit the circulation, and help digestion and assimilation of food. The sights and sounds of the open, too, often take the pressure off overworked nerves.

AVOIDANCE OF STRENUOUS SPORTS

There is some tendency today, with increased interest in sports for women, to forget that a pregnant woman, though needing exercise, must build up her strength, not tear it down. Some sports that she may have been used to are too strenuous for her when pregnant and may cause miscarriage. Golf may be indulged in moderately during the first half of pregnancy. Bathing and swimming also are permissible during the first half if the water is not too cold and if there is no chilling or other unfavorable effect; diving and stunt swimming should not be permitted. Horseback riding and tennis are to be forbidden. Motoring over rough roads or for long distances should be avoided if possible. Driving an automobile involves an additional risk and should be done moderately and cautiously. A long railroad trip or a long sea trip may cause a miscarriage or a premature delivery; journeys should be avoided unless absolutely necessary.

Exercise should be taken in some form throughout pregnancy under the direction of the physician. It should never be carried to the point of fatigue.

IMPORTANCE OF FRESH AIR

Fresh air, day and night, is required by all persons if they are to be healthy. None needs it more than the expectant mother, who breathes in from the air the oxygen for herself and the baby. She should sleep with the windows open, or out of doors, at all seasons of the year. In the living rooms, too, the air should be kept fresh, even in cold weather.

ADEQUATE SLEEP AND REST

Every pregnant woman should have at least 8 hours' sleep at night and an hour's nap or rest lying down during the day. Many women may think that they have no time for this rest period; but it is essential to health during pregnancy, and they will find that it enables them to do their work to better advantage.

CLOTHING

The clothing worn by the expectant mother should be loose enough not to interfere with the breathing, the circulation, or the increase in size of the baby. It should hang from the shoulders, not from a waistband, and should be as light in weight as it can be and still be warm enough in winter. She should wear sufficient clothing in cold weather to keep her comfortably warm, for it is important that she avoid getting chilled. The amount needed to make her comfortable will vary with the individual and will also depend upon the climate, the season, and the extent to which the house is heated in cold weather. In an evenly warm house or apartment much lighter clothing may be worn with comfort and safety.

DRESSES

Dresses to be worn during the later months of pregnancy must allow for the enlargement of the abdomen during this period. They should be so made that they are easy to put on and take off. Wrap-around dresses are usually convenient for this reason and because they are easily adjustable as to size. Many mothers like a dress with a separate jacket or an overblouse. For the latter the skirt is best attached to a bodice so that the weight hangs from the shoulders.

Suitable dresses are designed in many attractive styles. They can be bought ready-made, or patterns for making them at home can be obtained at any pattern counter.

BRASSIERES

A brassiere or breast binder may be worn that will support the breasts but not flatten them. It should be loose over the nipples.

CORSETS OR ABDOMINAL SUPPORTS

A maternity corset or an abdominal support relieves back strain and usually makes the mother more comfortable. An abdominal support may be made of two thicknesses of muslin, with darts as needed to make it fit the abdomen.

GARTERS

Round garters or any tight bands should not be worn, for they interfere with the circulation. Side garters may be attached to a waist hung from the shoulders, or to a belt that rests on the hip bones, or to the abdominal support.

SHOES

Shoes should be comfortably large and have low, broad heels. High heels should not be worn. They are dangerous not only because they may cause tripping and falling but because they throw the body out of the natural position and put undue strain on the muscles of the back. This is particularly true in the last months of pregnancy.

CARE OF THE BOWELS

Many women suffer more or less from constipation during pregnancy. There is a tendency to constipation from the pressure of the enlarging uterus on the intestines; but this tendency can usually be overcome by proper health habits, drinking plenty of liquids, eating the right foods, and taking regular exercise. Throughout pregnancy it is most important that the bowels should move freely at least once a day. Try to form the habit of emptying them, or trying to empty them, at the same hour each day. This should be done without fail, whether the attempt is always successful or not. Drinking plenty of water is important; a glassful just after getting up and just before going to bed may help. The foods suggested on page 9 should be eaten daily.

If, in spite of all these health measures, the expectant mother is still troubled with constipation, she should see her doctor. No medicines or enemas should be taken except upon his advice.

764123°—47——3

CARE OF THE KIDNEYS

As liquids help the pregnant woman's kidneys to throw off the baby's waste products as well as her own, she should have a liberal amount of water and other fluids daily.

In order to know whether the kidneys are performing their functions normally, the expectant mother should measure the quantity of urine passed in 24 hours and should take a specimen of it to the doctor for examination. If there is less than 3 pints, she is not drinking enough fluid; if the color is dark amber, she is probably not drinking enough water. Certain more serious conditions of the kidneys can be found only by chemical tests. That is why it is important for the doctor to make these tests regularly.

The method of collecting a 24-hour specimen of urine is as follows: Use a perfectly clean and scalded vessel or jar with a cover. Put in a teaspoonful of boric-acid crystals to keep the urine from decomposing. Beginning at some convenient hour in the morning, say 8 o'clock, empty the bladder and throw the urine away. Thereafter empty the bladder into the jar each time until the next morning at the same hour. Keep the jar tightly covered and in a cool place. Measure the amount of urine passed and, after shaking it well, fill a perfectly clean 6-ounce bottle, cork tightly, label with the name, date, and quantity passed in 24 hours, and take at once to the doctor.

BATHS AND CARE OF THE SKIN

The skin should be kept in good condition at all times and especially during pregnancy, when the work of the excretory organs, of which the skin is an important one, is increased. In order to keep the skin in health, the entire body should be washed every day. A brisk rubbing of the body with a rough towel after the bath stimulates the circulation. The bath may be a sponge, shower, or tub bath, except that the tub bath is not safe near the end of pregnancy. A morning bath in cool water is a more effective stimulant, but the warm bath is necessary for the thorough cleansing of the skin. Warm baths, with soap, should therefore be taken two or three times a week, even if the cool bath is taken regularly in the morning.

A pregnant woman should never take a very hot bath. If she has been used to the daily cold bath, there is no reason why she should give it up at this time, provided she feels a healthy glow afterward; but she may find it advisable to have the water cool, rather than cold.

Taking a tub bath when labor begins is dangerous and should never be done. Germs in the water may enter the birth canal and cause blood poisoning. There is some slight danger of such infection even before labor begins.

CARE OF THE TEETH

A mother's responsibility for the teeth of her baby begins long before he is born. The baby's teeth begin to form as early as the third month of pregnancy. All of the first set of 20 teeth are in the jaw at birth, and the quality of these

teeth as well as the formation of the jaw, therefore, is determined partly in the prenatal period. Later, if the baby is fortunate enough to be nursed at the breast, he will be preparing the way for well-spaced regular teeth. Nursing tends to strengthen the muscles of the jaw and to widen the dental arch. The substances needed to build teeth are mineral salts (calcium and phosphorus) and certain vitamins. The milk, eggs, fresh vegetables, fruits, and whole grains that the expectant mother is taking are the very foods that supply these materials for the teeth. The baby will take the material from his mother's body if he does not get them through her food. Outdoor sunshine and cod-liver oil help to utilize these food materials for the baby's growing teeth and bones.

The old saying, "For every child a tooth," need no longer be true if the mother is under the care of a good dentist.

It is true, however, that during pregnancy the mother's teeth will be especially affected by any deficiency in diet and are thus peculiarly susceptible to decay during and just after this period. For these reasons it is essential for every woman, as soon as she knows that she is pregnant, to go to a good dentist and have such repairs and extractions as are needed and to receive instruction in mouth hygiene. In addition to this, the teeth should be brushed after each meal and the mouth well rinsed. This brushing should be from the gums toward the biting edge and not crosswise.

CARE OF THE BREASTS

It should be the hope, as it is the first duty, of every mother to nurse her baby, Breast milk is the natural food for the baby. It is easily assimilated, cheap, clean, and convenient. Breast feeding gives a baby a better chance for life and for steady, normal growth.

In preparation for this function, all the healthful measures already set forth will play an important part. The mother can help further in this preparation by seeing to it that the breasts themselves are in the best possible condition. By wearing loose clothing she allows them plenty of room to develop; a tight brassiere may do harm by preventing free circulation. The breasts and nipples may require special attention. The doctor will examine them to see if special treatment is necessary. If a little dried scale appears on the nipples, do not pick it off. Rub a little cold cream over them carefully at night to soften the crust, which will probably be washed away by the bath. If the cold cream does not soften the scale, ask the doctor what to do.

INTERCOURSE DURING PREGNANCY

Intercourse during the early months of pregnancy is a frequent cause of miscarriage. The danger is increased if the intercourse takes place at what would be a monthly period were the woman not pregnant. During the last 2 months intercourse should be forbidden, because it may bring on labor ahead of time. If intercourse takes place shortly before labor begins, blood poisoning (septicemia) may follow with very serious results. It is, therefore, advisable to limit the

frequency of intercourse during the first 7 months of pregnancy and to stop it entirely during the last 2. Intercourse should also be avoided for the first 6 weeks after delivery.

MENTAL HYGIENE

How the expectant mother can keep her body in proper condition to produce a healthy baby has been pointed out in the foregoing sections. She needs also to keep her mind healthy. Confidence, contentment, a happy anticipation of the new life that will be hers to guide, and a cheerful acceptance of this responsibility—these are the signs of mental poise.

The mother will keep this poise much more easily if she and her husband are working together to make their home world a happy place for the baby to be born into. The prospective father can help by showing that he wants to help. Then he can speak gently and not claim the privilege of being cross because he has come in tired from his day's work. Pregnancy is not a disease, but it is "nature under a strain"; and the strain may show itself in overwrought nerves if there is jangling instead of peace in the family. There will be many things for the father and mother to talk over in the evenings and decide: That their baby will be breast fed because that will give him a better chance for life and health than the artificially fed baby has; that their baby will be trained in the right habits from birth; that they will work together, as they must, to give him the right habits and a happy and harmonious home.

How can the mother spend her day so that she will be ready for such a quiet, happy evening? Her 2 hours or more in the open air and sunshine will help her mentally as well as physically. They will help her all the more if she can arrange to get them without hurrying her household or other tasks and getting nervous over finishing them in time. Perhaps the need of these hours of freedom will make her think out some way to do her work that will take fewer steps and less time, and thus will allow for her hour's nap or rest lying down as well as her time out of doors. Recreation, so long as it does not tire her, is necessary for her well-being.

The greatest enemies of mental health (and you cannot have physical health unless you have mental health) are worry, nervousness, fears. The mother should not worry if she has pain she cannot account for; she should tell the doctor, and he will explain how to relieve it or remove the cause. She should not think of herself as an invalid just because she is pregnant, nor should her friends. She is to be envied, not sympathized with. Above all, she should not be afraid for herself or for the baby.

Some women are afraid that their babies will have birthmarks or "maternal impressions." By a "maternal impression" is meant an injury to the child through the influence of some harmful state of mind in the mother. In other words, there is a widespread feeling that if a mother is injured or sees some one injured or sees something especially repulsive to her, her baby will be "marked." But there is no connection between the nervous system of the mother and that of the unborn baby, and such "maternal impressions," as these alleged injuries

to the baby are called, are absolutely impossible. When "markings" and other deformities occur in infants they have been present in most cases since the earliest weeks of pregnancy, often before the mother knows she is pregnant.

A mother may harm the baby, however, by failing to plan her own life, physical and mental, in the way that will result in the highest degree of health and happiness for herself and, therefore, for the child. Nervousness and fears may affect her ability to nurse her baby. Steady nerves and mental poise and the earnest desire to give her baby this advantage will help her to do so. It cannot be emphasized too much that pregnancy is not a disease but is frequently a pathway to better health.

Home or Hospital for the Delivery

It is becoming more and more common for women to go to hospitals to be delivered. If a hospital is chosen, it should be one that is well equipped to handle obstetric work and that provides for the separation of maternity cases from all other patients in the hospital. Otherwise it has no advantage over a woman's own home. A well-equipped and well-conducted hospital has many advantages over a private home. It may be cheaper, it is far more convenient, and, if any emergency arises, it is much safer for both mother and baby. In some parts of the country no hospitals of any sort are near enough to be used, and the majority of women must necessarily be delivered at home. By careful examination the doctor can usually tell by the eighth month whether or not a normal delivery is to be expected. If he expects an abnormal delivery or if by this time he is still in doubt, he will probably arrange to send the woman to the nearest and best hospital available. The delivery may turn out to be easier than he had expected, but it is much better to go unnecessarily to a hospital than to be delivered at home with unfortunate results.

Hospital charges in the various parts of the country vary greatly. The private physician's fees are in addition to the hospital charges, but care given by an intern or a resident physician is included in such charges. If a special nurse is employed, the cost is much increased, for her salary is never included in the hospital rate. It would be well to have a definite understanding beforehand as to the cost of the physician, the hospital, and the nurse.

Supplies and Equipment

Hospitals vary in their rules about baby clothes; some prefer to furnish the clothes while the baby is in the hospital, but others require the mother to furnish them. Usually the only garments for the baby that the mother needs to furnish are those that he will wear when he leaves the hospital. Because hospitals differ in their requirements, the expectant mother should always find out what the hospital she is going to expects her to bring for the baby and also for herself. Hospitals sometimes furnish nightgowns, dressing gowns, and slippers. The mother must provide her own brush, comb, toothbrush, and other toilet articles.

THE PUBLIC-HEALTH NURSE HAS PREPARED THE BED FOR THE MOTHER'S DELIVERY AT HOME

THE DELIVERY ROOM AND ITS EQUIPMENT

The room for the home delivery, if there is a choice, should be the quietest in the house. If sun enters, so much the better. Nearness to the bathroom is to be desired. A single bed so placed that both sides can readily be approached is best. If the bed is low, it should be raised up on blocks so that the mattress is 30 inches from the floor. This is a great help to the doctor during the actual delivery, and afterward it makes the nursing care much easier. Placing boards across the bed under the springs prevents the bed from sagging and is of much

help at the time of delivery. The bed should be in a good light by day and well lighted at night. Two small tables are useful; but if they cannot be had, chairs or an ironing board may be used in their place. It is not necessary to take draperies down; but it is well to take out unnecessary furniture and to protect the floor and the floor covering.

SUPPLIES FOR THE MOTHER

The supplies considered necessary for a delivery at home vary greatly according to the mother's finances. The following list includes the supplies that it is advisable to have, but even this list can be cut if necessary:

1½ yards of waterproof sheeting at least 36 inches wide, or 1½ yards of white table oilcloth, to protect the mattress.
4 clean sheets and 4 clean pillowcases.
Receiving blanket for the baby (a piece of old clean blanket or cotton flannel about a yard square or a very soft bath towel).
4 delivery pads. To make one, take 12 opened-out sheets of newspaper and cover them with white cheesecloth with edges turned in and basted. They are better if they are padded with a 2-inch layer of absorbent cotton on top; but the cotton need not be used if this makes them too expensive. Iron the pads with a hot iron until they are scorched slightly, fold them top side in, and put them away in a clean pillowcase.
Supply of newspapers.
1 pound of absorbent cotton.
2 enamel basins 10 inches in diameter.
2 pails with covers. (These can be used after the delivery for diapers.)
Bedpan.
1 stewpan with handle (2-quart size).
1 pair of scissors.
1 skein of bobbin (narrow cotton tape) or strong cotton string to tie the cord.
4 ounces of tincture of green soap.
4 ounces of boric-acid crystals.
Mild soap.
Tube of plain white petroleum jelly.
2-quart fountain syringe or enema can (with rectal tip).
Hot-water bottle.
2 glass drinking tubes.
2 dozen safety pins, size 0.
2 dozen safety pins, size 4.
2 nail brushes, stiff and cheap.
2 washcloths.
1 dozen hand towels.
3 nightgowns (either low enough in the neck to allow for nursing or opening down the front).
1 pair white stockings.
10 yards of gauze for making sanitary pads, "sponges," and dressings.

The towels and the following articles are to be sterilized and put away until the time of delivery:

2 dozen sanitary pads. These may be bought ready-made or may be made at home of absorbent cotton wrapped in gauze or in old soft cloths that have been washed and boiled. Cut the cotton into pads 10 inches long, 4 inches wide, and 1 inch thick. Cut the gauze into pieces of the right size to fold around the cotton, and allow it, when folded, to extend 2 or 3 inches beyond the cotton at each end.

1 dozen gauze "sponges." Take a piece of gauze 16 by 16 inches; fold edges to center; fold again; bring raw ends to center; fold again, making a finished sponge about 4 inches square.

5 dozen cotton pledgets. Take a piece of absorbent cotton the size of an egg; make it into a ball; twist the loose end. Put pledgets into five muslin bags.

1 dozen gauze squares (4-inch size) for cord dressings. Make like the "sponges," then cut a hole the size of a quarter in the center of six of them.

1 yard of bobbin (narrow cotton tape) or strong white cotton string. Cut this into four pieces, each 9 inches long, to use in tying the cord. Put these and four of the gauze squares, two with and two without holes, into a muslin bag.

The doctor and the nurse will often carry many of these supplies, and before purchasing it would be wise to consult them in regard to what is needed.

If the mother buys supplies already sterilized, she should buy them only from reliable sources, preferably on the recommendation of her doctor, for it is of the utmost importance that delivery supplies should be thoroughly and recently sterilized and properly packed.

In many places the public-health nurse who is giving nursing supervision to the mother during pregnancy will arrange to have the mother's own supplies sterilized.

If the supplies are to be sterilized at home, the doctor or the nurse will show the mother how to do it. The following paragraph describes one way of sterilizing.

HOW TO STERILIZE THESE ARTICLES

Wrap the sanitary pads, towels, and sponges in packages of six each, and the remainder of the gauze squares in muslin, and fasten with common pins. Put these packages and the muslin bags (five containing the cotton pledgets, the other the four cord ties and four gauze squares) into a pillowcase. Use a large wash boiler with a cover. Put water into it to a depth of 6 inches. Suspend the pillowcase containing the dressings in a hammock made from a towel or a piece of muslin (the hammock must not touch the water). Attach the ends of the hammock to the handles of the boiler. Wrap a cloth around the cover so that the cover will fit tightly. Steam an hour. Dry in the oven or in the sun by pinning the bag to a clothesline. Repeat the process the following day. Dry thoroughly. Put the pillowcase away, unopened, until the articles are needed. If these articles have been sterilized more than a month, they must be sterilized again. The mother's nurse, the public-health nurse, or the doctor will explain to her the details of preparing and sterilizing these supplies.

SUPPLIES FOR THE NEWBORN BABY

The following list contains the articles it is well to have for the baby:

BED AND BEDDING

1 bassinet, basket, or box, for bed. A large flat clothes basket makes a good bed. A basket or box that can be moved about readily is a great convenience. The bed should stand on a firm table or on legs of its own, as the floor is apt to be drafty.

1 flat, smooth mattress. Several thicknesses of quilted cotton padding or a folded cotton blanket will make a soft, flat, smooth mattress; this has an advantage over an ordinary mattress, for it can be washed and boiled and dried in the sun. A pillow should not be used for a mattress, nor under the baby's head.

1 rubber sheet to cover mattress.

3–6 small sheets. Small sheets can usually be made by cutting up a partly wornout sheet from the household supply. A pillowcase can be used for a sheet. Only one sheet is needed for a baby's bed.

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3–4 cotton pads, or folds of cotton cloth, to be placed under the baby, between the cotton sheet and the rubber sheet.
3–4 squares of cheesecloth or soft cotton cloth, to be used under the baby's head.
2 or more lightweight blankets of wool or cotton, according to the weather.
1 mosquito netting, large enough to cover the entire bed (used in warm weather if house is not well screened).

CLOTHING

3 outing-flannel bands 5 or 6 inches by 18 to 20 inches, with edges pinked, not hemmed. Strips of folded surgical gauze may be used instead. A roll of folded gauze may be bought, and pieces cut off the roll as needed. A band is not used after the cord drops off and the navel is healed. Bands are usually supplied by the hospital if the baby is born there.
3–4 shirts, sleeveless or long-sleeved, depending on the climate and season.
3–4 dozen diapers.
5–6 nightgowns or wrappers (dresses are unnecessary).
2–3 flannel or knitted squares, about 36 by 36 inches, for outdoor wraps. A warm outer garment, such as a bunting, can be used if desired.

TOILET SUPPLIES

4–6 soft towels.
4–6 soft washcloths.
1–2 bath towels for the bath table.
1 cotton bath blanket.
Absorbent cotton, sterilized by manufacturer.
Covered jar for pieces of cotton.
Safetypins, rustproof.
Covered container for safety pins.
Plain mineral oil.
Small flat dish from which oil can be used.
Soap and soap dish—any bland, unmedicated soap (not necessary if doctor advises oil bath only).
Paper bags for waste (these may be made by folding newspapers).
1 covered pail for soiled diapers. Covered enamelware pails made especially for this purpose can be bought; they can be used also for boiling diapers. Any large pail that does not rust will do if it has a tight-fitting lid.

FEEDING EQUIPMENT

2 nursing bottles for drinking water and orange juice.
2 bottle caps.
2 nipples.
1 covered jar for clean nipples and caps.
1 jar for used nipples and caps.
1 kettle, with cover, for sterilizing bottles, caps, and nipples.

If the baby cannot be breast-fed, additional equipment will be needed for preparing and giving cow's-milk feedings. It is usually better not to buy such equipment, however, until you know you will need it. If you have on hand the articles listed above, and a saucepan and a teakettle (or two saucepans), and a teaspoon and tablespoon, you will be able to prepare and give the cow's-milk feedings for a few days, until other supplies can be bought.

ADDITIONAL CONVENIENCES

Bathtub—tin, enamelware, or rubber. A hand basin is convenient during the early weeks.
Table on which to bathe and dress baby.
Dresser or chest of drawers.

Tray for toilet articles.
Table for toilet articles. (Top of dresser, small shelf, or window ledge may be used instead.)
Baby scales (beam type).
Soiled-clothes hamper.
Screen, or some other device to protect baby from drafts.
Wall thermometer.
Heater for baby's room.
Electric fan.
Low, comfortable armchair for mother to sit in while nursing baby.
Drying frames for wool garments.

Common Disorders of Pregnancy

NAUSEA AND VOMITING

Nausea with or without vomiting is one of the common ailments of early pregnancy (from about the fourth to the twelfth week). It is very apt to come in the morning, and for that reason is often called "morning sickness," although not infrequently it comes only in the late afternoon or early evening. Many women do not have it at all. If there is more than slight occasional vomiting, the doctor should be consulted. Eating five or six small meals a day instead of three larger ones helps to relieve this nausea. Taking something to eat before getting up, such as toast or crackers, will often help. No one method of treatment works satisfactorily with all women. Therefore the physician must decide what is best for each individual.

HEARTBURN

Not infrequently during pregnancy the expectant mother complains of burning in the throat caused by bitter eructations (belching) from the stomach. This condition is commonly called "heartburn." If it occurs, the doctor should be told.

VARICOSE VEINS AND PILES

As the weeks go by, the enlarging uterus presses more and more on the blood vessels in the lower abdomen, and in many instances the veins of the leg appear as bluish lines. These are called "varicose veins." Later as they enlarge they may cause slight burning or tingling sensations in the legs. If the symptoms remain slight, no treatment is necessary. If they become more marked, lying down for an hour morning and night with the legs elevated or at right angles to the body may give relief. The doctor's attention should be called to these varicose veins, and he will direct any necessary treatment.

When the varicose veins appear in the rectum, they are called "hemorrhoids," or "piles." These again are due to pressure; and if any discomfort is felt the doctor must be told at once so that he may direct appropriate treatment.

CRAMPS IN THE LEGS

Cramps in the legs, usually after the mother has gone to bed, may occur in any part of the pregnancy, but they are more apt to come in the latter half. If such cramps occur the doctor should be told at the next visit. Relief may be given by gentle massage of the legs or by bending the foot up on the ankle.

RELAXATION OF THE PELVIC JOINTS

As pregnancy advances, the three joints which go to make up the pelvic girdle, two behind and one in front, oftentimes relax to such an extent that severe pains are felt in the legs. An abdominal support, such as has been recommended (see p. 13), will do much to relieve this condition.

LEUCORRHEA

Leucorrhea (whites) is a whitish discharge from the vagina. Leucorrhea is often annoying but not usually serious. The physician should be told of it, and he will prescribe the necessary treatment. Douches of any sort should not be taken except under his advice.

Complications of Pregnancy

TOXEMIA

If the mother's health is imperfect, a toxic, or poisoned, condition may result which will be more or less serious for both the mother and the child. Some of the common symptoms are:

(1) Serious or persistent vomiting.
(2) Repeated headaches.
(3) Dizziness.
(4) Puffiness about the face, hands, and legs.
(5) Blurring of the vision, or spots before the eyes.
(6) Burning pains, especially about the pit of the stomach.

Having one or even more of these symptoms does not necessarily mean that toxemia is present, for in many cases the cause of the trouble may be removed very easily without serious results. But when such symptoms appear, they should always be brought at once to the attention of the doctor, and it will be well also to send a specimen of the urine to him immediately. Serious results from toxemia are often prevented by telling the doctor at once about these symptoms.

There is an unfortunate tendency among women to regard some of these disturbances as a necessary part of pregnancy. No pain or distress that can be prevented by proper means should be endured during pregnancy or at any other time. There is no truth in the old saying that a "sick pregnancy is a safe one." If a pregnant woman will follow certain simple rules for health, she will not have cause to fear toxemia and will be in better condition to meet the strains of pregnancy and childbirth. She should—

(1) Place herself under the care of a competent physician.
(2) Consult him regularly, at least once a month during the first 6 months, then every 2 weeks or oftener, preferably every week in the last 4 weeks of the pregnancy.
(3) Have her blood pressure taken regularly.
(4) Have her weight taken regularly and recorded for purposes of comparison at future visits.
(5) Have her urine examined at the visits to the doctor.
(6) Guard carefully against constipation.
(7) Eat the kinds and amounts of food recommended in the section on Diet (p. 6); avoid overeating; and use very little salt, in cooking or at the table.

(8) Drink 8 glasses of fluid a day.
(9) Exercise daily out of doors but not to the point of fatigue.
(10) Keep all the rooms of the house well ventilated day and night.
(11) Bathe every day.
(12) Wear lightweight but warm and comfortable clothing.
(13) Sleep at least 8 hours out of the 24, rest during the day, and not get overtired.
(14) Report to the doctor all acute illnesses, especially colds, sore throat, or persistent cough.
(15) Go to the dentist early in pregnancy.
(16) Report any unfavorable symptom to the doctor.

MISCARRIAGE

"Miscarriage" is commonly used to mean the birth of the child before it is sufficiently developed to be able to live outside its mother's body—that is, before the end of the sixth month of pregnancy. There are many possible causes of this mishap. Among possible causes are heavy work (such as washing, sweeping, lifting, or moving heavy furniture), running a sewing machine or other form of taxing labor, strenuous indulgence in amusements that jar the body (such as dancing, skating, tennis, golf, horseback riding, or climbing), or jolting over rough roads in an automobile, or long journeys by train or boat. Some constitutional disease of the mother, a fault in the position of the uterus or some abnormality of its lining, or intercourse during pregnancy (see p. 15) may cause miscarriage. Microscopic examination of tissues thrown off from early miscarriages has shown that many are due to faulty development of the fetus (unborn baby); such miscarriages are nature's way of getting rid of a pregnancy that could not go on to final success. In many cases the cause is impossible to discover, and a woman may have repeated miscarriages. The prevention of many miscarriages has been made possible by the use of a variety of drugs and gland preparations which can be administered under a doctor's direction. When previous miscarriages have occurred, it is of the utmost importance that the mother consult her doctor as soon as she suspects that she may be pregnant, in order that the doctor may begin whatever treatment he thinks necessary. If a woman has had a miscarriage before, a long stay in bed may help to carry her past the danger when nothing else will do it.

Syphilis is often the cause of miscarriages, but as yet it has not been proved that it causes miscarriage in the first 2 months of pregnancy.

Any woman who has had repeated miscarriages or premature labors with dead babies should have a Wassermann or other blood test to find out whether she has syphilis. This test should be part of the doctor's complete examination of every expectant mother; it is of special importance for the mother who has had a previous miscarriage of which she does not know the cause. The blood for this test is easily withdrawn from the arm. If it shows that the mother has syphilis, treatment should be started at once and kept up systematically through-

out this pregnancy and subsequently until cured. If she receives proper treatment, a syphilitic mother will give birth to a healthy baby.

At the first appearance of bleeding or abdominal pain the mother should go to bed at once and send for the doctor. If the mother cannot get the doctor, she must remain perfectly quiet in bed for at least 48 hours after bleeding or pain has stopped. A miscarriage occurring before the sixth week may appear as nothing more than an unusually severe menstrual period.

What happens is that the placenta and membranes which surround the fetus have become loosened from the uterus. If the loosening is slight, complete rest in bed may prevent it from going further. If a large part of these membranes, however, has become separated from the uterus, the separation will become complete and the fetus will be expelled. It is not until the twelfth to the fourteenth week of pregnancy that the union between these membranes and the uterus becomes firm; consequently it is during these early weeks that miscarriage is most likely to occur.

When a miscarriage has occurred, there is danger that portions of the membrane may stick to the uterus and not be expelled. In order to find out whether this is the case, it is important that a doctor should be in attendance and that whatever has been expelled be saved for him to see.

A neglected miscarriage may mean the total loss of health; a spontaneous miscarriage properly attended is not likely to have bad results. On the other hand, a self-induced miscarriage may result in blood poisoning and death. It is unreasonable to regard a miscarriage as something to be concealed, and dangerous to deprive oneself on this account of proper care and treatment. This unhappy way of regarding a miscarriage is perhaps partly due to the association in many persons' minds of a miscarriage with a criminal abortion, the results of which are often serious and many times fatal. Such an attitude of mind is unjustified, for there are many causes of miscarriage, and often, humanly speaking, it is unavoidable. It should be treated like any other illness, and such measures should be taken as will best conserve the future health of the disappointed mother.

BLEEDING IN PREGNANCY

Bleeding, or the show of blood from the vagina in a pregnant woman, demands immediate investigation, for it never occurs in normal cases. It may be a very serious sign, especially if it occurs in the latter part of pregnancy. It always must be regarded as serious until the doctor by careful examination determines that it is not. At the first sign of blood from the vagina a pregnant woman should go to bed and should notify the doctor at once. Under no circumstances should a woman who has had vaginal bleeding be up and about her house attending to her household. It cannot be overemphasized that bleeding from the vagina in pregnancy is abnormal and may be a very serious complication. The responsibility for good results when bleeding has occurred is twofold: (1) Upon the patient—she must report it to her doctor at once; (2) upon the doctor—he must respond without delay, determine the cause of the bleeding, and give the proper treatment.

Birth of the Baby

At the end of the 9 months' development in the uterus the baby is born, and the act of birth is called "labor." This act is a natural one and though it is painful and tiring, it should end normally with a healthy mother and a healthy baby. It probably will have this happy ending if the mother has had proper care during her pregnancy and is in the hands of a competent attendant who understands the need for perfect cleanliness and uses every means to secure it.

PRECAUTIONS THAT MUST BE TAKEN

The prevention of the infection that causes puerperal septicemia, or "childbed fever," lies in the scrupulous care taken by everyone who is concerned in any way with the attendance upon a woman in childbirth to allow nothing not absolutely clean to touch her. Puerperal septicemia is a largely preventable disease, since its cause and the measures necessary to prevent it are well known, and all women in childbirth and their families have a right to insist upon this protection. No physician who values his professional reputation will be satisfied to neglect any of the precautions against this most dreadful disease. The patient can help by having ready clean bedding, towels, and sterile supplies. The woman, the family, and the nurse must be ready in every way to aid the physician in this effort.

The well-trained doctor *insists* that the external parts be shaved when the patient goes into labor. This shaving is for the patient's protection and does much toward the prevention of blood poisoning. The doctor can obtain much information as to how soon the baby will be born by rectal examinations, and the patient should never refuse to permit them. Vaginal examinations during labor, no matter how carefully done, always carry a certain amount of risk.

LABOR

The progress of labor is divided into three stages. The first is occupied with the dilatation, or enlargement, of the mouth of the uterus, the second with the actual birth of the child, and the third with the separation and throwing out of the afterbirth and membranes.

The first stage is the longest and most trying part to the expectant mother. During this time the mouth of the uterus, which is less than one-quarter of an inch in diameter at first, must increase to 3½ to 4 inches before it is large enough to permit the child's body to pass out. This stage usually takes a number of hours and is very tedious to the woman, because she is unable to feel herself that she is making progress. Labor pains may begin in the abdomen or in the back.

They may come at first half an hour or an hour apart, or perhaps only a few minutes. They will come at shorter and shorter intervals and with greater and greater strength as the mouth of the uterus gets larger. Sometimes the bag of waters (amniotic sac) that surrounds the baby breaks before labor begins. At the time labor begins or shortly after there may be a slight blood-tinged discharge. This is commonly called the "show" and is more likely to appear in first labors than in later ones. The progress of labor cannot be judged by the show alone. The regularity, the frequency, and the strength of the pains are the chief guides.

To pass the time between the pains, the woman may occupy herself in any way she likes; she may sit down, lie down, walk about, or even sleep, if she can. She should notify the nurse and the doctor as soon as she becomes convinced of the regularity of labor pains, or in case water in any quantity comes away before the pains begin, or in case of any bloody discharge. Since the doctor cannot hasten the progress of this stage, it is not usually necessary for him to remain with her all the time during the early part. But he should keep close watch of the case and be always within easy call. No enema should be taken at the onset of labor except on the advice of the physician. If the woman is hungry, she may have some light nourishment, usually limited to liquids. As soon as the doctor comes, he will give advice on all necessary details.

The bed should be made ready, the mattress being protected by a rubber sheet or oilcloth or several layers of newspapers. An extra sheet, folded in the middle, is pinned across the bed under the mother's hips; this sheet may be drawn out after the labor, leaving the bed clean and dry.

If the confinement is to take place at a hospital, the woman should be ready to go when regular pains have started. She will take with her a bag that should have been packed some time before, containing nightgowns, toilet articles, slippers, dressing gown, and the like, with the baby's first outfit.

The second stage of labor, in which the actual birth occurs, is very much shorter than the first. It is frequently less trying to the mother than the first stage, because as each pain occurs the muscles are pushing the baby along the birth canal, and she feels that she can help by straining, or "bearing down." The amniotic sac is usually ruptured as the pains of this stage begin, and after this occurs it will usually not be long before the child is born. In case the bag of waters has broken earlier, as sometimes happens, the birth is said to be "dry" and may proceed somewhat more slowly. Whether the pain of the actual birth should be lessened or deadened by the use of an anesthetic will be decided by the physician.

After the baby is born the third stage of labor takes place—namely, the separation and throwing out of the afterbirth (placenta and membranes that connected the baby's body with the mother during pregnancy). This occupies about half an hour. "Afterpains" are the pains that immediately follow the emptying of the uterus and are due to the natural contractions of its muscle fibers. These pains are less likely to be felt in a first confinement than in later ones.

Emergencies

It sometimes happens that the baby is born before the arrival of the doctor or nurse, when labor comes on earlier than was expected, or the doctor is at some distance. In an emergency like this it is necessary for the expectant mother and her family to know what to do.

The delivery room must be set in order and the bed freshly made. The mattress should first be protected with the rubber sheet or oilcloth, or newspapers, and the extra folded sheet as described on page 30. The mother's external parts should be well washed and shaved. The sterilized dressings, still in their packages, should be put close at hand. A large kettle of water should be boiled and cooled without being uncovered. At this same time the scissors for cutting the cord should be boiled for 10 minutes and left untouched.

Meanwhile, if matters have gone so far that the pains are returning every 5 minutes, or if the "waters" have broken, the woman should go to bed; she will lie on her back, with her knees drawn up and spread apart. (If the doctor is in charge, he may prefer another position.) When the pain comes, the patient should bear down only when she feels she must. Whoever is at hand to help will then put one of the delivery pads underneath the mother's hips and should thoroughly disinfect the hands by scrubbing them for 10 minutes in warm water, using a brush and plenty of soap. The attendant will sit by the mother until the baby is born, but should not touch her. After the head is born, if the face of the baby turns blue, the mother should be told to bear down, and at the same time she may press with both hands upon her abdomen, while the attendant grasps the baby's head and pulls it steadily but gently downward. This will shortly bring out the baby.

As soon as the baby is born, the attendant should grasp him by the heels with one hand and hold him up so as to drain any mucus out of his throat, taking care not to pull on the cord, and then clean the baby's eyes, nose, and mouth, as described in the section, First care of the newborn, (p. 33). To stimulate breathing the attendant should rub the fingers up and down the baby's back. If the baby does not breathe and cry at once, the attendant should tap him gently on his buttocks or snap a finger against the soles of his feet. Too vigorous efforts to make the baby breathe must be avoided. When he cries, he should be laid down close enough to the mother so that the navel cord will not be stretched, care being taken not to smother him nor allow any of the discharges to touch his face. Then the attendant will tie the cord twice, once 2 inches from the child's navel, once 2 inches nearer the mother, using pieces of sterilized bobbin or other string that has been boiled. The cord is then cut with the scissors between the

two ties (ligatures). There will be a single spurt of blood, but bleeding will cease immediately if the cord is tied tight. If bleeding from the baby's navel should not stop altogether, the cord should be tied again nearer the baby without disturbing the first tie. The cord dressing should be put in place at once. The baby should then be covered with a light, warm, and soft blanket, removed to a place of safety while the mother is being taken care of, and kept warm.

The separation of the afterbirth usually takes place within 10 to 30 minutes. Sometimes it takes as much as 2 hours, but the process must not be hurried, unless under the doctor's directions. Sometimes the mother can help by straining as she did to bring the child; but unless the doctor or nurse has arrived it is better to be patient and wait for the contents of the uterus to be expelled naturally. All the soiled pads and dressings and everything that has been expelled should be saved for the doctor's inspection.

After the soiled pads have been removed, the region around the vagina is carefully washed with sterile warm water, pieces of sterile gauze or cotton pledgets being used for this purpose. An abdominal binder and one of the sanitary pads are then put on. All the soiled dressings are removed and the pad beneath the mother renewed. If after all is over the mother suffers from a nervous chill, as often happens, she need not be alarmed. A hot-water bag at her feet, a glass of hot milk, and a blanket will soon warm her, and she will usually be ready to fall asleep to rest after the fatigue of the labor.

There is always a considerable discharge of blood just after the birth. The attendant can help to stop this bleeding if it continues. Sitting on the bed, facing the foot of the bed with the hands on the mother's abdomen, she will feel for the uterus, which will be a rather large, soft mass just under the navel, and will massage it gently, passing the thumb over the front of the organ, while the fingers surround it. This will cause the muscles of the uterus to contract and will help to stop the bleeding. These measures are especially necessary if the amount of bleeding seems excessive and the doctor has not arrived. While the attendant is caring for the baby, either the mother herself can be rubbing the lower abdomen or someone else in the family can help temporarily. Cracked ice, wrapped in gauze, may be laid over the uterus to help in the contractions, and sometimes putting the baby to the breast will serve the same purpose.

When the doctor comes, he will repair any lacerations (tears) that may have occurred during the baby's birth.

First Care of the Newborn

Immediately after the baby is born his eyes should be carefully wiped free from mucus or blood with the pledgets of sterile clean absorbent cotton which were prepared beforehand. (See Supplies for the mother, p. 21.) A separate piece of cotton should be used for each eye and should be discarded as soon as it has been used once. Wipe from the nose outward without opening the lid. At this time also the lips and nose should be wiped clean, and the nurse's or doctor's little finger, wrapped with a piece of moist cotton, should be passed into the child's mouth and any accumulated mucus removed by an outward sweep of the finger.

NITRATE OF SILVER FOR THE BABY'S EYES

As soon after birth as possible the eyelids should again be wiped clean of mucus, and 2 drops of a silver preparation which the doctor or nurse will provide are put into each of the baby's eyes, the lids being gently opened so that the medicine will get inside the eye. (Nitrate of silver in 1 percent solution is put up in ampules for this purpose.) This care is necessary in all cases because a baby's eyes may become infected during the passage through the birth canal, and this infection sometimes leads to an eye disease of the newborn, called ophthalmia neonatorum, which may cause blindness. The treatment is simple and perfectly harmless and is certain to prevent the infection from developing. If, however, the treatment is not given and symptoms of the disease appear (namely, redness, swelling of the lids, and a discharge from beneath them), the mother should not lose an hour in placing the baby in the hands of the best doctor she can find. The eyes may be saved by a few hours' care, but treatment to be efficient must be begun at once; neglect may doom the baby to lifelong blindness or at best imperfect vision. It is the law in most States that this condition must be reported to the health authorities.

In bathing the eyes always use a different piece of cotton or gauze for each eye, and in case of any infection use the greatest care not to infect one eye from the other. The germs may be carried by the fingers, the towels, the cotton, or any other article that has touched the infected eye.

BATHING THE BABY

For at least 12 hours after the baby is born he needs to rest, and he should not be disturbed to be bathed.

Some time after this and before the end of the first day most babies are given the first bath—an oil bath, which is to remove the white material left on the skin after birth.

Some doctors, however, recommend that this material be left on until it disappears naturally. In this case it is usual to wipe the material from the baby's face, and from the creases and folds of the skin, with a little cotton dipped in warm oil, and not to give the complete bath until the baby is 1 or 2 weeks old. If the first oil bath does not remove all the white material do not rub hard to get it off. It will come off at a later bath.

ONE SATISFACTORY WAY OF BATHING A YOUNG BABY

The baby's skin should be patted dry with warm and very soft old towels. A square of sterile gauze, with a hole for the cord, is placed over the navel. This square is folded back to cover the cut end of the cord, or a second pad is placed over the cut end. The dressing is held in place with the flannel binder already prepared. Unless this dressing becomes wet or soiled it is not necessary to change it for a few days. The stump of the cord will usually shrivel and fall off within a week. After this happens the navel will be dressed in the same manner until it is entirely healed.

After the baby's first bath, some doctors prefer that the daily bath should be an oil bath; others prefer soap and water. If soap and water are used, a sponge bath should be given until the cord has dropped off and the navel is healed; after that a tub bath may be given.

THE BABY'S STOOLS

The first discharges from a newborn baby's bowels are known as meconium. They are very dark green, thick and sticky, with little or no odor. These soon change to the normal yellow stools of the healthy baby after he begins to be fed. If any blood is seen in the stool of a newborn baby, the fact should be reported to the doctor immediately.

Lying-In Period

The 5 or 6 weeks just after childbirth, when nursing begins and the organs connected with childbirth return to the condition they were in before pregnancy, is called the lying-in period.

For some time after the baby's birth there is a discharge from the vagina. This discharge (the lochia) at first is reddish blood, but later is brown, then yellowish. It is likely to increase somewhat as the mother begins to get about.

A shower or sponge bath should be taken, rather than a tub bath, for 2 or 3 weeks after the baby's birth.

It is important that the bladder be emptied frequently after childbirth. If no urine is passed for 10 or 12 hours, the doctor should be notified at once.

The mother, no matter how well she feels, needs rest before taking up her regular work and play. Going back to them too early may slow up her recovery. By the third or fourth day she may sit up with a back rest for short periods. Most women may sit up in a chair for gradually increasing periods from the eighth or ninth to the fourteenth day. They may walk about the house after 2 weeks but should not go up and down stairs before the end of the third week, and not oftener than once a day during the fourth week. Whenever possible a woman should refrain from full activity for 6 weeks and should have an hour's rest in bed both morning and afternoon during this period.

If there have *not* been extensive lacerations, doctors often recommend exercise after childbirth. After the first 24 hours the mother may begin by simply moving her legs on the bed. Lying on the abdomen an hour each day helps the return of the uterus to a normal position. The following exercises may be begun about the seventh or eighth day: (1) Bend and straighten each arm several times, then both arms. (2) Lying on the back, bend the knee until the heel touches the buttock; then raise the leg straight above the body, and lower it slowly to the bed. Do this three times with each leg and three times with both legs. (3) Brace the feet against the foot of the bed and rise to a sitting position without using the hands. These exercises may be taken twice a day.

The mother is advised to assume the knee-chest position for 5 or 10 minutes a day, beginning about the tenth day and continuing for 2 or 3 months. This means kneeling and bending forward so that the shoulders touch the mattress firmly, the head is turned to one side, and the knees are as far forward as possible.

Six weeks after the baby's birth the doctor should give the mother an internal (vaginal) examination. If he finds anything wrong he will direct the treatment.

In a few cases the monthly periods may return at once, but in the great majority they do not return until a month or two after nursing has stopped. Nursing the baby does not prevent conception, even though menstruation has not begun again.

Nursing the Baby

It is the first duty of every mother to nurse her baby. Every doctor, nurse, or other attendant should urge that the mother nurse her baby and should do everything possible to start the secretion of milk, to promote it, and even to bring it back if for any reason it has stopped. It is true that not all mothers are able to nurse their babies, even when they would gladly do so, but the cases in which maternal nursing is impossible, at least for a few weeks, are very uncommon. There are only a few good reasons for not nursing an infant under 6 months old. Chief among them are tuberculosis in the mother and the beginning of another pregnancy.

BREAST FEEDING BETTER THAN ARTIFICIAL FEEDING

Mother's milk gives the baby the greatest help in the complicated and difficult task of growing, and it also makes the baby more resistant to the various sicknesses to which he may be exposed. Satisfactory nursing greatly increases his chances for growing up. Besides, it is easier to nurse the baby than to feed him otherwise. To make bottle feeding safe requires scrupulous and constant care. To secure a supply of pure milk, to keep it at the proper temperature, to have it properly prepared for the baby's use, to change the composition of the milk mixture according to his changing needs, to keep all the utensils used in the care and preparation of the baby's feedings absolutely clean, to have the bottles and nipples scrubbed and sterilized, call for constant care and attention even when the baby is thriving. But when, as is often the case, the baby does not thrive, the difficulties of artificial feeding are greatly multiplied. Too often artificially fed babies pass their first 6 or 12 months in a series of unfortunate feeding experiments, with the result that the growth of the organs, the functions, and the general development are retarded.

COLOSTRUM

At the birth of the baby there is, in by far the majority of cases, no milk in the mother's breasts. The secretion that is in the breasts at that time is called colostrum. The mother's milk does not usually come for 2 or 3 days, sometimes longer, after the baby is born. The colostrum has a laxative effect on the baby and for that reason is valuable during the first days of his life. After the mother has had a good rest for about 12 hours after the delivery, the baby should be put to the breast for 2 or 3 minutes. By this early nursing the breasts are stimulated to secrete milk, and the baby is trained early to nurse. If before the first nursing

the baby becomes restless and cries a great deal, he may be given a few teaspoonfuls of warm boiled water from a bottle. It is not necessary that the water be sweetened or contain any medicine.

POSITION FOR NURSING

The position that the mother assumes for nursing her baby varies more or less with the advice of the physician and nurse. A satisfactory position is for the mother to turn well onto the side on which she is to nurse, with the arm on that side raised up above her head. The baby, lying on the bed at her side, is able to get hold of the nipple satisfactorily, and the mother is not in a cramped position.

FEEDING SCHEDULE

The time for nursing varies considerably in different parts of the country, but the majority of physicians now have the mothers nurse not oftener than once in 3 hours, and many put the baby at once on 4-hour feedings. The routine in the establishment of nursing varies considerably, depending many times upon how much milk there is in the breasts. As has already been said, the first nursing takes place after the mother has had a good rest. Some doctors increase the daily number of feedings gradually, so that the regular routine is established by the third or the fourth day of life. Others put the baby on the 4-hour or the 3-hour schedule immediately after the first nursing.

CARE OF THE BREASTS

Before the baby nurses the first time the breasts should be thoroughly but gently washed. If the nipples have been carefully attended to in the last 2 months of the pregnancy, there will be no dried secretion on them. If by chance the nipples have not been properly attended to and there is dried secretion on them, care must be taken in removing it. The nipples first should be covered with a simple cold-cream ointment in order to soften this secretion. Under no circumstances should it be picked off, for, if it is, damage may be done to the nipples, and this may allow infection of the breasts to occur.

After the milk comes in, there may be congestion for a few days. In the majority of cases there is no need of doing anything to the breasts with the first engorgement (fullness). Occasionally the physician in charge may suggest the use of a breast pump or of massage or the use of warm oil to relieve the tension in the breasts, but none of these should be used unless the physician advises it. If the engorgement is very painful, the comfort of the patient may be increased materially if ice bags are put to the breasts. A supporting bandage may greatly help large pendulous breasts, but it must be put on properly and must in no way constrict them. Massage must not be used on the breasts unless it is specifically ordered by the physician in charge. Manipulation of the breasts at the first engorgement does more harm than the good that may come in a few cases.

A breast pump must not be used unless it is ordered by a physician; and if it is used, it must first be boiled and then cooled (see p. 53).

In the early weeks of nursing the breasts are extremely liable to injury, and the nipples especially are very apt to become cracked. If this occurs, infection may follow. The three requirements for the protection of the breasts are (1) absolute cleanliness, including washing with soap and water before and after each nursing; (2) avoidance of the slightest injury; and (3) protection of the nipples and, in the beginning, of the breasts themselves with clean linen between nursings. If the nipples crack, the baby may have to be taken off the breast entirely for a few nursings, or a nipple shield may have to be used. A lead nipple shield should not be used, as it is dangerous. If a nipple shield is used, it should be boiled and cooled before each nursing. Advice on the use of the shield should be sought from the doctor.

THE BABY'S PROGRESS

Whether the baby is doing satisfactorily may be found by weighing him every 2 or 3 days. A nursing baby should gain at least 4 or 5 ounces a week. An ounce a day is very satisfactory gain, and many babies gain much more. After the nursing is well established there should be a steady gain in the baby's weight.

If the baby cries before the feeding is due or immediately after the feeding, it may be because he is not getting enough milk, and this can readily be determined by weighing him with all his clothes on before and after nursing and noting the gain. It is not sufficient to do this once in the day. In order to find out whether there is a sufficient amount of milk, he should be weighed before and after every feeding in one 24-hour period and the amount of milk obtained noted. Even if the baby is getting only 1 ounce at a feeding—obviously not enough—this is not usually a sufficient reason for weaning him. The breast milk must be supplemented with modified cow's milk. The thing to do is to obtain the advice of some good doctor who understands infant feeding. Four or five ounces of mother's milk is distinctly worth while for the baby, especially if this can be kept up for the first 3 months of his life. The attempt to nurse the baby will stimulate the flow of milk, and then, if the breasts are completely emptied at each nursing,[1] the milk oftentimes will increase, especially if the mother's diet and her rest periods and general health are carefully looked after.

Another bulletin of the Children's Bureau, Infant Care, gives directions for the care of the baby to the end of the first year.

[1] If the baby does not empty the breasts, the milk should be expressed by hand or by means of a breast pump. See p. 52.

Hygiene of the Nursing Mother

DIET

The foods needed by a nursing mother under ordinary circumstances will be the same as those needed during pregnancy. They should be nutritious and appetizing. If any food or drink disturbs the mother's digestion, this may have an unfavorable effect upon the milk. If a mother eats slowly, chews her food thoroughly, and, above all, has sufficient rest and refrains from worry, there will be no reason to suppose that her milk will not agree with the baby.

DAILY FOOD NEEDS

The food plan for a day as suggested for the pregnant woman (p. 9) may well serve as a pattern for the diet during the period when the mother is nursing the baby. The only change necessary is an increase in the total amount of food, not only to meet the mother's own needs but also to provide enough milk of good quality for the baby. It is usually wise to make this change by increasing the milk from 1 quart to 1½ quarts and by adding an extra serving or two of vegetables or fruit; a second serving of meat or an alternate, such as fish; some more bread and cereal (with continued emphasis on the whole-grain or enriched products); and possibly some additional fat. Fresh milk should be pasteurized or boiled.

The meal plan that follows includes the foods needed daily.

A DAY'S MEAL PLAN FOR THE AVERAGE HEALTHY MOTHER WHO IS NURSING HER BABY

BREAKFAST

Fruit: Grapefruit, orange, or other fruit rich in vitamin C.
Cereal: Whole-grain or restored.
Bread: Whole-grain or enriched bread with butter or with margarine that contains added vitamin A.
Milk: A glass of milk or a cup of cocoa made with milk.
Coffee may be taken if desired, but it should not replace the milk.
Egg: An egg. (The egg may be eaten at this meal or at some other meal of the day.)

MIDMORNING LUNCH

Milk: A glass of milk or of a flavored milk drink.

DINNER

Meat: A liberal serving of lean meat.
Vegetables:
A potato—white or sweet.
A cooked vegetable—usually a green leafy vegetable or a deep-yellow one.
A raw vegetable—this may be served as a salad.

Bread: Whole-grain or enriched bread with butter or with margarine that contains added vitamin A.
Dessert: Desserts made with milk and fruit should be served often.
Milk: A glass of milk.

MIDAFTERNOON LUNCH

Fruit or fruit juice: A generous serving of fruit or a glass of juice.

SUPPER OR LUNCHEON

Main dish: A dish made with eggs (if an egg was not eaten at breakfast) or with cheese, or small serving of meat, or occasionally some dried beans or peas.
Vegetable: A cooked vegetable or a salad, depending upon the choice made at other meals.
Bread: Bread with butter or with margarine that contains added vitamin A.
Dessert: Raw or cooked fruit, with plain cake or cookies.
Milk: A glass of milk.

Cod-liver oil, or some other good source of vitamin D, as directed by the doctor.

SLEEP AND REST

At least 8 hours' sleep at night and 1 hour's rest during the day are desirable for every nursing mother, because if the mother is tired she may not produce enough milk for her baby. The 2 a. m. nursing can be stopped as soon as the baby will sleep through the night without it; that is, usually before the end of the second month. There will then be only one nursing at night—at 10 p. m.—and the mother may have a long, unbroken sleep after this feeding.

FRESH AIR AND EXERCISE

Moderate exercise in the open air and sunshine, especially walking, is desirable for the sake of good health. If a mother has much work to do in the house she will not have strength for much walking or other exercise outdoors. She can try, however, to spend some time each day resting in the open air and sunshine.

Fresh air indoors is needed for health; and besides, sleeping and living rooms are pleasanter if kept well ventilated.

WORK

Overwork during the nursing period is undesirable for the mother. Often a mother who at first has plenty of milk for her baby finds when she goes back to her regular work that the amount is greatly reduced. Many mothers are not strong enough to undertake housework until at least 6 weeks after childbirth. By this time the milk flow has been well established.

Many mothers have to work hard during the nursing period, but a mother will have better general health if arrangements can be made that permit her to resume her duties gradually. Sometimes a friend or relative can assume the household responsibilities until the mother is strong. When this is not possible it can sometimes be arranged for a housekeeper to assist the family. The father should do all he can to help the nursing mother get the rest she needs.

When the mother first begins to work again she can avoid fatigue by taking short rests between tasks. Lying down for 5 minutes several times a day enables

her to do more work than she would otherwise be able to do safely. To get more rest it is well for her to nurse her baby in a half-reclining or other comfortable position. This will give her 15 or 20 minutes' relaxation every few hours.

CONTENTMENT

The mother who can lead an even, regular life without emotional upsets will nurse her baby the more successfully on that account.

Fright, grief, anger, or any other great excitement can make a mother "lose her milk" entirely. Worry, anxiety, or any lasting nervous strain can do the same thing.

RECREATION

Some form of recreation is good for everyone. Recreation and outdoor life help to keep the mother happy and contented, and help also to maintain the supply of breast milk.

REGULATION OF THE BOWELS

Constipation during the period soon after childbirth is very common because the mother's body does not return to normal strength for several weeks, and sometimes not for several months.

Every effort should be made to regulate the bowels by means of foods and regular habits. Leafy vegetables are helpful, and also fruits, particularly apples, rhubarb, figs, and prunes. Eating whole-grain bread and cereals will frequently correct constipation. A glass of water taken regularly the first thing in the morning may help.

It is well to make a habit of going to the toilet regularly once a day whether or not there is a desire to have a stool.

As the mother becomes strong, daily walks or other exercises may assist in making the action of the bowels regular.

Laxative drugs should not be used except upon the advice of a doctor. Some of these drugs pass into the breast milk and affect the baby.

If the mother does become constipated an enema is a safe way of emptying the bowels.

BATHING

Many women perspire more freely during the nursing period than at other times. Sometimes this occurs only during the time the milk flow is becoming established, but sometimes it persists during the entire nursing period. The extra perspiration and the fact that a breast full of milk occasionally leaks make it necessary for the nursing mother to take extra pains with her toilet to prevent the odors of perspiration and stale milk.

ALCOHOL AND TOBACCO

The question is often asked, "Should a woman who has been used to smoking give it up during the months when she nurses her baby?" or, "Should a woman who has been used to taking an occasional alcoholic drink refrain from taking even that during the months when she nurses her baby?" At present there is no evidence that if the mother smokes moderately or takes an occasional drink of an alcoholic beverage any harm will be done her baby; nor can it be said definitely that these things do not do harm.

The Premature Baby

The Premature Baby

If a baby is born more than 2 weeks before the end of 9 months of pregnancy he is not so well developed as a full-term baby. Such a baby is known as a premature baby, and he needs special care.

The birth of the baby before the expected time often means that arrangements for the special care that he needs must be made quickly, and so it may be helpful to have readily available the suggestions given here regarding the care of the premature baby during the first few days or weeks of life. The Children's Bureau bulletin, Infant Care, gives additional suggestions.

The successful rearing of a premature baby requires not only the advice of a doctor and the assistance and guidance of a nurse, but also intelligent and earnest cooperation by the mother, the father, and all the other members of the family. All these should work together from the time the baby is born to provide for his welfare.

The doctor's directions will be aimed at keeping the baby warm, properly nourished, and protected from infection, and they should be carried out carefully. The instructions in this bulletin have been prepared to help the mother care for her premature baby in whatever way her own doctor directs. If the instructions given here differ somewhat from those given by her doctor, the mother should not be disturbed. She should realize that her own doctor's instructions, based on his examination of her baby and his observation of that baby's behavior, growth, and development, are planned to meet her baby's individual needs.

Because a premature baby always excites special interest, the mother will receive much well-meant advice from neighbors and other persons, but she should disregard this advice and take that of the doctor. She should also be very strict in refusing to let visitors go near the baby, because even if they appear to be healthy they may carry infection to the baby that may be fatal to him.

It is well for the mother of a premature baby to realize that if her baby keeps well, he has just as good a chance as a full-term baby to develop normally. After a premature baby has grown up he is likely to be as strong as if he had been born at the normal time.

A mother who, during pregnancy, places herself under a physician's care will be more likely to have a full-term baby than one who goes without such care. Some causes of premature birth are unavoidable, however, and in spite of every effort a certain number of babies are born prematurely.

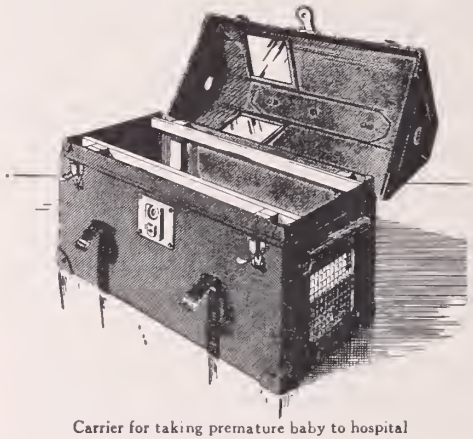
Most premature babies are born unexpectedly, and it is wise for every expectant mother to have her equipment for the birth ready about 2 months before the baby is due.

The earlier a baby is born, the more difficult it is to care for him. A baby born 2 or 3 weeks before the expected date of birth may be quite strong and little different from a full-term baby, but a baby born 4 or more weeks early may be very small and difficult to save. Occasionally a baby born at full term is exceptionally small and feeble and must be cared for like a premature baby. *All babies weighing less than 5½ pounds at birth should be treated as if premature.*

CARE IMMEDIATELY AFTER BIRTH

It is of the utmost importance to give a premature baby proper care during and *immediately after* birth. He needs care by a doctor and a nurse who know what to do and who have the equipment needed.

As soon as the baby is born he should be placed in a soft, warm blanket wrapped loosely about him. The doctor or nurse will, if necessary, remove mucus or other fluid from his mouth and throat by means of a rubber suction bulb (ear syringe) or by a small catheter attached to a glass syringe. When it is certain that the baby is breathing well he may be placed, with the blanket still wrapped loosely around him, in an incubator or some kind of heated bed that can be kept at a temperature of about 80° to 90° F. (See p. 48.) The cord can then be dressed and drops put into the eyes to prevent infection.



Carrier for taking premature baby to hospital

If the baby is born at home the decision must be made whether he is to be cared for at home or taken to a hospital.

Premature babies that weigh more than 4 pounds and are vigorous can usually be taken care of satisfactorily at home if the home conditions are favorable and certain precautions are taken. Some smaller babies also do well at home; in fact, they are often cared for best at home unless a hospital suitably equipped for the care of such babies is available. If, however, the baby is feeble, and it is difficult to make him breathe, very special care is needed, which usually can best be had in a hospital.

It is best to have the doctor or the nurse who has seen the baby advise the family whether his condition is good enough to permit the journey to the hospital and how he should be transported. A public-health nurse or a visiting nurse may be available to stay with the baby during the trip.

The baby should not be taken to the hospital until his breathing is well enough established for such a trip to be safe. Great care should be taken to keep him warm during the trip, as chilling at this time decreases the chances of saving his life. To prevent him from losing any of his body heat he should be wrapped in a soft, clean blanket which has been warmed, and he should be carried in a

basket lined with warm-water bottles (115° F.). To prevent burns, a folded blanket or towel should be placed between the baby and the bottles. The doctor or nurse may be able to provide as a carrier a special bag that is easier and safer to use than a basket. One type of such carrier is shown in the sketch on page 46.

GENERAL CARE

A doctor, preferably one trained in care of babies, should see the baby *at birth* and *at regular and frequent intervals thereafter*, and his directions should be followed carefully.

If the services of a nurse, preferably one who has had training in the care of premature infants, can be obtained, it will be a great help to the mother. Skilled nursing care can usually be obtained from a public-health nurse. If more hours of nursing care are needed than this nurse can give, she can advise the mother how to get in touch with another nurse.

In caring for a premature baby three main aims must be kept in mind constantly:

1. To keep the baby warm.
2. To protect him from infection.
3. To feed him properly.

KEEPING THE PREMATURE BABY WARM

At birth a baby loses the protection that he has had inside his mother's body (in the uterus) where he is surrounded by fluid that is kept at an even temperature by the mother's body. A baby born at term is better prepared to become adjusted readily to living outside his mother's body than is the premature baby. The baby that is prematurely born must be protected from changes in the environment, even slight changes in temperature. The amount of heat necessary to keep the premature baby warm will depend upon his size, development, and vigor. The more premature and the smaller he is the more difficult it will be to regulate his body temperature properly. The baby's body temperature, taken by rectum two or three times a day, should be about 97° to 99° F. An even temperature as low as 97° F. is probably better for the baby than an uneven temperature that goes higher. The temperature of the room and of the bed should be kept as constant as possible.

The Premature Baby's Room.

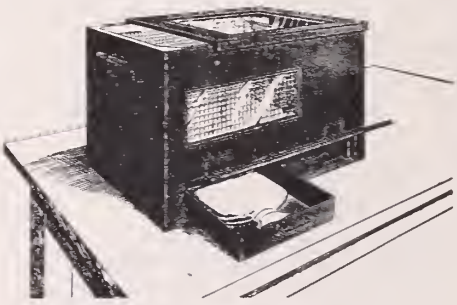
It is easier to keep the premature baby's room warm and at an even temperature if it is a small room. One window, or preferably two, will allow for sunlight, and for ventilation by opening at the top. The baby's bed should be so placed that the air from the window will not blow on the baby. A thermometer should be hung on the wall over the baby's bed but not near a radiator or a window. Frequent readings of the thermometer should be made and recorded on a chart so placed that it is easy to read. The temperature of the room should be maintained evenly at a point between 75° and 80° F. day and night.

Heated Beds.

In addition to a warm room, some type of heated bed is usually needed by a premature baby. A thermometer should be placed on the mattress, beside the baby and under the covering if any covering is used. The temperature of the air inside the bed, at the mattress level, should be kept as even as possible at a point to be decided on by the doctor (usually from 80° to 90° F.), depending on the size, vigor, and body temperature of the baby. It may be well to increase the moisture in the air by placing a shallow pan of water inside the bed near the source of heat.

There are several types of heated beds that may be used.

A simple type of heated bed (see accompanying sketch) is a box with a basket inside that is placed on blocks. The box has a sliding cover with a window in it. An asbestos pad, the size of the bottom of the basket, is placed under the basket, over the source of heat, so that there will be no danger of burning the baby. Heat is obtained from hot-water bottles of rubber or metal, or heated bricks or bags of heated sand, placed in pans on the floor of the box and under the basket. Bricks or bags of sand or hot-water bottles should not be too hot to hold in the bare hands. The temperature inside the bed should be kept as constant as possible, and it is best therefore to change one hot bag or brick or bottle at a time, so as not to cool the bed.



Bed heated by hot-water bottle

If the house is wired for electricity an electrically heated incubator, so constructed that the temperature can be regulated automatically, can be used. The moisture (relative humidity) inside such a bed can be increased by placing a pan of water near the source of heat (an electric-light bulb). Many State health departments have such incubators to lend.

If an electrically heated incubator is to be used the doctor will advise you with regard to the type to be selected, and the doctor or the nurse will teach you how to use it. The following precautions should be taken:

1. A baby in an incubator should be observed often to see that he is all right.

2. The thermometer inside the incubator should be looked at often to see that the temperature of the incubator is properly regulated.

3. The amount of heat should be regulated by a thermostat so that the bed cannot get too hot (above 90° F.) and so that the temperature at the mattress level will vary as little as possible, preferably not more than 2° F.

4. Electric-light bulbs should be protected by wire guards and should be so placed that the baby cannot come in contact with the guards.

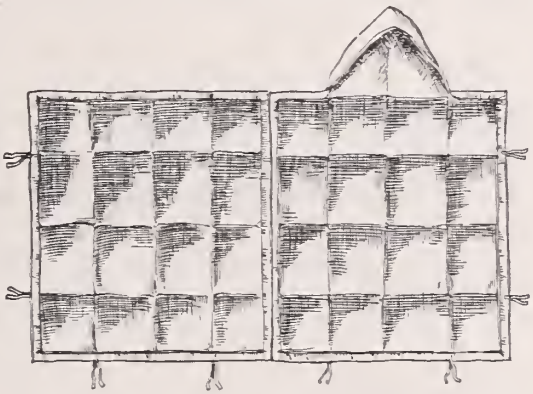
5. The incubator must be large enough for the baby to move his arms and legs freely without touching any heating unit or other mechanism. It should be at least 13 inches wide, 23 inches long, and 9 inches high (above the mattress level).

6. Never exclude air completely from the incubator.

In warm weather it may not be necessary to heat the incubator; but there is an advantage in keeping the baby in it, for it protects him from drafts and from infections due to contact with persons who may come into the room.

CLOTHING

The premature baby's clothing should be light and loose, as it is especially important that such a baby should have plenty of opportunity to move his arms and legs freely. Immediately after birth the baby should be placed in a soft, warm blanket and the blanket folded loosely about him. He should be kept in the blanket while the care necessary at this time is given. For temporary use a wadded jacket made of gauze, lined with cotton batting, may be used. (See accompanying sketch.) Later a one-piece lightweight flannel gown may be substituted for the jacket.



The usual type of diaper is not suitable for the premature baby. A small square of absorbent cotton covered with gauze, or some other type of disposable pad, can be laid under the baby to serve as a diaper—*not folded between the legs.* These pads can be easily changed when they become soiled.

CARE OF THE SKIN

The premature baby's skin is very tender. After birth the folds of the skin may be wiped gently with soft, dry gauze or cotton. It is best not to bathe the baby with water or even with oil during the first 12 to 24 hours after birth. He need not be bathed even for a week or 10 days or longer. After the first day the folds under the arms and between the legs may be patted or wiped very gently with soft gauze or cotton moistened with a little warm mineral oil. When using the oil pour a small amount into a clean dish or cup; if any is left over it should be thrown away. When the pad used for a diaper is changed the parts of the body that are soiled may be wiped with oil.

When the baby is older and more vigorous and when he no longer needs to be kept in an incubator he may be bathed just as any young baby is.

PROTECTION FROM INFECTION

Premature babies are very susceptible to infections, especially skin infections and colds. They have very little resistance to infection, and a cold may be very serious—even fatal—to a premature baby.

Infection is carried to a premature baby from the hands of the mother or other person caring for him, or from the nose and throat of persons coming near him, or from milk or water that has not been boiled. Infection is also carried by flies and other insects.

To protect the baby from infection the following rules should be carefully followed:

Only one person in the household should care for a premature baby, and no one except the person who cares for the baby regularly should go near him.

While caring for a premature baby the mother or nurse should wear a gown that she keeps especially for this purpose.

The person who cares for the premature baby should wash the hands before handling the baby each time. It is especially important to wash the hands *before* and *after* changing the pad that serves as a diaper and *just before* feeding the baby.

No one with any infectious condition, even a slight cold, should be allowed to take care of, or go near, a premature baby. Visitors, especially young children, should never be permitted in a premature baby's room.

Flies and other insects should be kept away from a premature baby. If the house is not well screened a netting should be kept over the baby's bed.

The premature baby's tender skin may become infected if rubbed. The parts of his body that become soiled should be cleaned by gently wiping with soft gauze or cotton moistened with oil.

The premature baby's bedding and clothing should be changed just as soon as they become wet or soiled. The baby should not be removed from the bed while this is being done.

SLEEP

The premature baby in the early weeks of life will sleep most of the day and night and will usually have to be wakened for feeding. It is important that he be kept awake for the feeding so that he will swallow well. If he cannot be roused the doctor should be notified immediately.

BOWEL MOVEMENTS

The premature baby passes dark, sticky, green material called meconium on the first two days of life, just as does the full-term baby. During the next few days the movements will become brown and then yellow. Most premature babies have four to six bowel movements a day, which are small and pasty. If the baby has frequent movements (more than six a day) or loose movements, even if not frequent, or if a bowel movement contains blood the doctor should be notified immediately. Blood in a bowel movement is not always red; it may be dark brown.

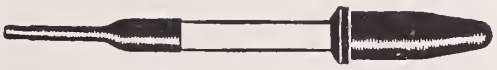
FEEDING

The doctor will advise the mother in regard to the baby's feeding. The instructions given here are to guide the mother before the doctor comes and to help her to follow his directions.

The premature baby does not need food nor water for about 12 hours after birth, but after this period a sufficient supply of fluid is essential to his health. The amount given daily will at first be small; it may be increased gradually until he can take daily a total amount of fluid (milk and water) equal to about one-eighth or one-sixth of his body weight (about 2 ounces for each pound of body weight). (See p. 54.)

The milk and the water should be given in the way best suited to the baby's condition. Most premature babies are not able to suck well, and therefore they are fed with a medicine dropper. Some babies are so weak that feeding must be given with a stomach tube (so-called catheter feeding). Only a trained person should be allowed to do this.

It is wise to delay putting a premature baby to the breast until his breathing and swallowing are well established and until he is strong enough not to be overtired by nursing. If the baby cannot nurse at the breast or is too weak to draw milk from the nipple of a bottle, the mother's milk should be expressed by hand or by means of a breast pump and fed to the baby slowly with a medicine dropper. Water also may be given, slowly, by medicine dropper. The end of the glass medicine dropper should be covered with a piece of soft-rubber tubing to prevent injury to the baby's mouth. The rubber tubing should extend about a quarter of an inch beyond the end of the glass tube. (See sketch.)



Any utensil that is to touch the baby's food or water must be sterilized by boiling for 5 minutes before it is used and carefully washed with soap and water after it is used. This includes not only the medicine dropper and rubber tip but also such things as the breast pump, the cup or glass used to hold milk or water, the funnel and strainer, and all nursing bottles, bottle caps, and rubber nipples.

To give water or milk, raise the baby's head and shoulders and squeeze the water or milk slowly from the dropper while watching to be sure that the baby is able to swallow. Gentle pulls on the dropper will often stimulate the baby to suck and swallow. Care must be taken not to give the milk or water faster than the baby is able to swallow it.

Care should be taken not to overtire the baby during feeding. The feeding should require no more than 20 minutes. Very small premature babies, because they can take only small amounts of milk at any one feeding, may have to be fed every 2 hours. Larger infants may be fed at 3-hour or even at 4-hour intervals.

WATER

The premature baby should not be given water until he is about 12 hours old. The water that the baby will need during each 24 hours should be boiled and cooled and should be kept in a covered glass jar that has been boiled for 5 minutes to make it sterile.

It is best to begin with very small amounts of water, about one-half to 1 teaspoonful, given with a medicine dropper every 2 to 3 hours, alternating with the feedings. A record should be kept of the amount of water that the baby takes. If the baby is too weak to take the necessary amount of fluid by mouth the doctor

may inject some fluid, such as salt solution, under the baby's skin as often as he considers necessary.

During the period when the baby is receiving very small feedings of breast milk, special care must be taken to give him enough boiled water. As he takes more milk he may take less water, but it is well to offer water to him between feedings even when he is strong enough to take an adequate amount of milk at his feedings.

MILK

Milk feedings may usually be begun after the baby is 18 hours old.

Breast Milk.

Breast milk is the best food for the premature baby. At the end of 12 hours the first efforts should be made to empty the mother's breasts. The colostrum—and the milk when it comes—should be expressed at regular intervals and given to the baby. As it may be some weeks before the baby is able to draw even small amounts of milk from the breast, it will be necessary for the mother to empty her breasts at regular intervals, not only to obtain milk for the baby during the early weeks of life but to keep up the milk flow until the baby is strong enough to nurse.

Before expressing the milk, whether by hand or by breast pump, scrub the hands and nails with soap and warm water for a full minute, using a brush and then rinsing well with warm water. Wash the breast and nipple, using a clean cloth and soap and water and being careful to rinse off all the soap. Dry the hands on a clean towel. If the milk is to be given to the baby later, rather than immediately after it is expressed, or if the milk of any woman other than the baby's own mother is used, it should be brought to a boil, cooled rapidly, and then kept on ice in a sterilized bottle, covered with a sterilized bottle cap.

Have ready a sterilized (boiled) glass to receive the milk. If the glass has no lip, and if a nursing bottle is to be used, have ready also a sterilized funnel for use in pouring the milk into the bottle.

The doctor or the nurse will show you how to empty the breasts by hand. The following paragraph describes one way to do it.

Hand expression.—To express milk from a breast by hand, place the balls of the thumb and forefinger on opposite sides of the breast, about 1½ inches from the nipple. This is usually at the edge of the darker-colored part. Press deeply and firmly into the breast until the resistance of the ribs is felt. Then bring the thumb and fingers tightly together well behind the base of the nipple. When the fingers and thumb are pressed deeply into the breast, keep them there and repeat the "together" motion 60 to 100 times per minute. Speed is important and is attained after some practice. The fingers should not slip forward on the breast lest the skin be irritated. It is not necessary to touch the nipple. If the stripping of the breasts is done in this way it should cause no discomfort.

Expression by breast pump.—A breast pump is a convenience to a mother who must empty her breasts frequently. The simplest kind of pump consists of a glass cup and a rubber bulb. These pumps can be bought in most drug stores; they cost less than a dollar. Electric breast pumps are often used in hospitals.

Before the breast pump is used it should be washed with soap and water, and sterilized by boiling 5 minutes. When washing the rubber bulb take care to get into all the grooves in the part that joins the glass.

Cow's Milk.

If breast milk cannot be obtained, cow's-milk feeding will become necessary. Various milk mixtures have been given to premature babies with success. The doctor will order the mixture best suited to the baby's individual needs.

If it is not possible to get a doctor's advice at once, one of the following milk mixtures may be used until the doctor decides upon the feeding:

Evaporated milk, 3 ounces. Water, 6 ounces. Granulated sugar or corn sirup, 1 level tablespoonful.	or	Half-skimmed cow's milk, 8 ounces. Water, 2 ounces. Granulated sugar or corn sirup, 1 level tablespoonful.

The mixture should be boiled for 5 minutes. (Suggestions for the preparation of milk mixture are given in Infant Care.)

Half-skimmed cow's milk is obtained by removing half the cream from the top of the bottle. The milk and the remaining cream should be thoroughly mixed.

The doctor may order that some form of sugar be used other than granulated sugar or corn sirup.

SUGGESTED DAILY FEEDING SCHEDULE FOR PREMATURE BABIES

	Baby weighing less than 3½ lbs.				*Baby weighing 3½–4½ lbs.*				*Baby weighing 4½–5½ lbs.*			
	Breast milk		Boiled water		Breast milk		Boiled water		Breast milk		Boiled water	
	Number of feedings	Amount at each feeding	Number of times given	Amount at each feeding	Number of feedings	Amount at each feeding	Number of times given	Amount at each feeding	Number of feedings	Amount at each feeding	Number of times given	Amount at each feeding
		Teaspoonfuls [1]		*Teaspoonfuls* [1]		*Teaspoonfuls* [1]		*Teaspoonfuls* [1]		*Teaspoonfuls* [1]		*Teaspoonfuls* [1]
1st 12 hours							2	½			3	1
13th hour				½				½				1
16th hour				½				½–1				1
18th hour		½				½				1		
20th hour				½				½–1				1–2
22d hour		½				½–1				1 –2		
2d day	8	½–2	6	1 –1½	8	1 –3	6	1 –2	8	2 –3	6	2–3
3d day	8	1 –2½	6	1½–2	8	2 –3½	6	2 –2½	8	3 –4	6	2–4
4th day	8	1½–3	6	2 –2½	8	2½–4	6	2½–3½	8	4 –6	6	3–4
5th–7th day	8	2 –4	6	2½–3	8	3 –5	6	3½–4	8	5 –8	6	4
8th–10th day	8	3 –5	6	2 –3	8	4 –6	6	3	8	6 –9	6	3
11th–14th day	8	3½–5½	6	2 –3	8	5 –7	4	3	8	6 –9	6	3
						Ounces		*Ounces*		*Ounces*		*Ounces*
15th–17th day	8	4 –6	6	2 –3	8	1 –1¼	4	½	8	1¼–1¾	3	½
18th–21st day	8	4½–6	6	2 –3	8	1 –1½	3	½	or {8	1½–1¾	3	½
									{6	2 –2½	3	½

[1] This refers to the ordinary household teaspoon, which contains 5 cubic centimeters.

Note.—The schedule is arranged so that milk is given every 3 hours, at 3, 6, 9, and 12 o'clock. Water is given midway between feedings except at 1:30 a. m. and 4:30 a. m. It may be necessary to feed very small or weak infants every 2 hours. Increases in the feeding should be made gradually, not more than ½ teaspoonful at a feeding. For infants weighing less than 2½ pounds the increase should not be more than ¼ teaspoonful at a feeding. When the baby is taking 2½ to 2¾ ounces of breast milk per pound he is receiving as much as is usually necessary for gain in weight. Further increase in feeding is made as the baby gains weight and therefore requires more food to supply 2½ to 2¾ ounces per pound. After the baby has begun to gain satisfactorily and is taking his feedings well, the interval between feedings may be increased and more milk given at each feeding.

VITAMINS

The premature baby needs, in addition to milk, whether breast milk or cow's milk, vitamins that are important for growth and development.

A premature baby needs vitamin D even more than a full-term baby because he is growing more rapidly. For promotion of normal growth and for prevention of rickets he should receive about two or three times as much vitamin D as the full-term baby, or about 1,600 to 2,400 international units a day. Vitamin D is contained in fish-liver oils such as cod-liver oil, but *cod-liver oil should not be given to premature infants who are small and do not swallow well.* Vitamin D should be given to the premature baby in a concentrated form and one that contains vitamin A also. It should be begun before the end of the first week of life.

A premature baby needs to have vitamin C also. This is the vitamin contained in orange juice. In order to give the proper amount to meet the needs of the premature baby a concentrated form of vitamin C, ascorbic acid, should be given (one 25-mg. tablet a day, dissolved in water), beginning when the baby is 2 weeks old. As the premature baby grows larger and more vigorous, the amount of ascorbic acid may be increased, or orange juice may be given in place of it. The amount of orange juice will be the same as for the full-term baby.

IRON

When the premature baby is about a month old the doctor will prescribe some preparation of iron to prevent him from becoming anemic.

As the premature baby grows older the same foods should be added to his diet as are added to the diet of the full-term baby. (See Infant Care.)

GAIN IN WEIGHT

The premature baby, like the full-term baby, usually loses some weight in the first 2 or 3 days after birth. He begins to take food when he is about 18 hours old, and when he is 4 or 5 days old he will usually be able to take enough food to prevent further loss of weight. Premature babies usually regain the birth weight by the second or third week.

The baby should be weighed at least twice a week. The weighings should be at about the same time of day, and the weight should be written down and shown to the doctor. Great care should be taken not to chill the baby during the weighing. He can be weighed in his jacket or gown or wrapped in a warmed blanket. Then the covering can be weighed separately and its weight subtracted from the total weight of the baby and the covering; this will give the baby's weight.

The baby may not gain weight every day, and some days he may lose weight, but week by week he should gain steadily if he is well and is getting suitable food.

OUTDOOR LIFE

Since changes in temperature are to be avoided for the premature baby, he should not be taken outdoors while very small. The age at which he may be

taken outdoors varies with the size and degree of prematurity of the baby and with the weather and the season of the year. After he has attained the size and vigor of a 2-month-old full-term baby, he may be taken outdoors in the same way that a full-term baby of this size would be.

Sun baths cannot be given to small premature babies. Special effort must therefore be made to give them some form of tested vitamin D. When they grow larger and more vigorous, sun baths can be given just as to full-term babies.

PERIODIC HEALTH EXAMINATIONS

The mother should make arrangements to have the baby seen by a doctor at regular intervals. The doctor will examine the baby and advise the mother in regard to his feeding and general care. The examination will include an appraisal of the baby's physical and mental development.

LATER DEVELOPMENT

As the premature infant grows older he should gradually become more and more like a full-term baby. Though small, he should have good color, his muscles should be firm, and he should gradually become active and alert. He may be slower than a full-term baby in learning to do some things like holding up his head and sitting up. If he is protected from infection and gets the proper food and care he will catch up to the full-term baby in course of time. The time that this will take will depend on how many weeks before term he was born.

Glossary

Abdomen.—The belly; the part of the body between the chest and the pelvis, containing the stomach, bowels, etc.

Abnormal.—Irregular; not according to the usual standard or condition.

Abortion.—A miscarriage.

Afterbirth.—The mass of tissue (placenta and membranes) expelled from the uterus after the baby's birth.

Anus.—The outlet of the bowels.

Assimilation.—The process by which the body absorbs or makes use of nourishment.

Birth canal.—The passage through which the child is born.

Blood pressure.—The pressure of the blood on the walls of the blood vessels. It is of special importance that the doctor take the blood pressure of the expectant mother at each visit because a rising blood pressure is one of the symptoms of toxemia of pregnancy.

Calcium.—Lime; a mineral required by the body, particularly for the teeth and bones.

Childbed fever.—Fever of the mother resulting from blood poisoning at or near the time of childbirth; puerperal septicemia.

Circulation.—Movement in a regular course, as the circulation of the blood in the vessels of the body.

Colostrum.—The first fluid from the breasts of the mother after delivery of the child but before the milk comes.

Conception.—The fertilization by the father of the egg in the mother which starts the growth of the fetus in the mother's body.

Confinement.—The time that it is necessary for a mother to remain in bed during and after the birth of her baby.

Constipation.—The passing of very hard material from the bowels, or the passing of a very small amount, or failure to empty the bowels daily.

Constitutional disease.—A disease in which the whole body or a large part of it is affected.

Criminal abortion.—An abortion or miscarriage that is artificially brought about and is not necessary to save the life or protect the health of the mother.

Delivery.—The birth of the baby.

Dental arch.—The arch of the jaw that contains the teeth and is covered by the gums.

Digestive organs.—The principal digestive organs are the mouth, stomach, and bowels.

Douche.—A stream of water directed upon or into a part of the body.

Enema.—The insertion of a medicine or liquid into the rectum.

Fetus.—The unborn child in the uterus.

Goiter.—Enlargement of the thyroid gland, causing a swelling in the front part of the neck.

Hygiene.—A system of health rules or principles that will prevent disease and keep the body in good condition.

Infection.—The entrance into the body of germs that cause disease.

Intestines.—The long tube extending from the stomach to the anus; the bowels.

Involution.—The return of the uterus to its natural size after the baby is born.

Kidneys.—The two organs in the abdominal cavity that secrete the urine.

Lactation.—The formation of milk in the mother's breasts after the birth of the baby; the nursing period.

Laxative.—A food that keeps the bowels open; a medicine that causes the bowels to move.

Massage.—Treating the body by systematic stroking, rubbing, or kneading.

Menstrual period (menstruation).—The monthly flow in women.

Miscarriage.—Expulsion of the fetus before it can live outside the mother's body—that is, before the seventh month of pregnancy; abortion. *See* Self-induced miscarriage; Criminal abortion.

Nausea.—Sickness at the stomach.

Navel.—The place in the abdomen where at birth the cord was attached that connected the baby with the mother.

Pelvis.—The bony cavity formed chiefly by the hip bones and containing the uterus, vagina, bladder, and rectum.

Placenta.—The organ within the uterus of the pregnant woman through which nourishment passes from her to the fetus. It is attached on one side to the uterus of the mother; a cord on the other side connects it with the fetus.

Premature.—Happening before the usual time, which in reference to the length of pregnancy is 9 months; as, premature birth, premature labor.

Prenatal.—Before birth; refers to the period of pregnancy.

Prenatal center or clinic.—A place to which expectant mothers can go for advice free or for a small sum; usually connected with health departments or hospitals.

Puerperal septicemia.—A disease caused by blood poisoning at or near the time of childbirth; sometimes called childbed fever.

Rectum.—End of the lower intestine leading to the opening or anus.

Rickets.—A disease of children in which the bones become soft because of lack of calcium. It can be prevented and cured by sunlight and cod-liver oil or other source of vitamin D.

Self-induced miscarriage.—A miscarriage or abortion that is brought about by the mother.

Spontaneous miscarriage.—A miscarriage or abortion that occurs naturally, without artificial interference.

Sterilize.—To make free from all germs.

Stool.—The discharge from the bowels.

Syphilis.—A certain constitutional disease that is communicable through contact—by sexual intercourse or otherwise—with a person who has the disease or with his towels, drinking glass, or other personal belongings. The baby in the uterus will become infected with the disease from a mother who has it if the mother does not receive adequate treatment during pregnancy. For this reason a Wassermann or other blood test is necessary for all pregnant women.

Thyroid.—A large gland in the neck that is of great importance to the proper working of the body machinery. *See* Goiter.

Tissue.—A collection of cells forming parts of the body, as bone tissue, brain tissue, muscle tissue.

Tonsils.—Small, soft masses lying on each side of the throat.

Ultraviolet light.—Rays of the sun or of certain kinds of artificial light that do not give heat and cannot be seen but have a powerful effect on living matter; they prevent and cure rickets.

Uterus.—The organ in which the unborn baby lies; womb.

Vagina.—The passage through which the baby leaves his mother's body at birth; the lower part of the birth canal.

Vitamins.—Certain food elements that are necessary for proper nourishment and growth. Lack of vitamins in the diet produces certain diseases such as rickets.

Wassermann test.—A test of the blood to find out if syphilis is present.

Womb.—Uterus.

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PRENATAL CARE

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